USPTO
APR 26 2007
PATENT & TRADEMARK OFFICE

FIG. 1

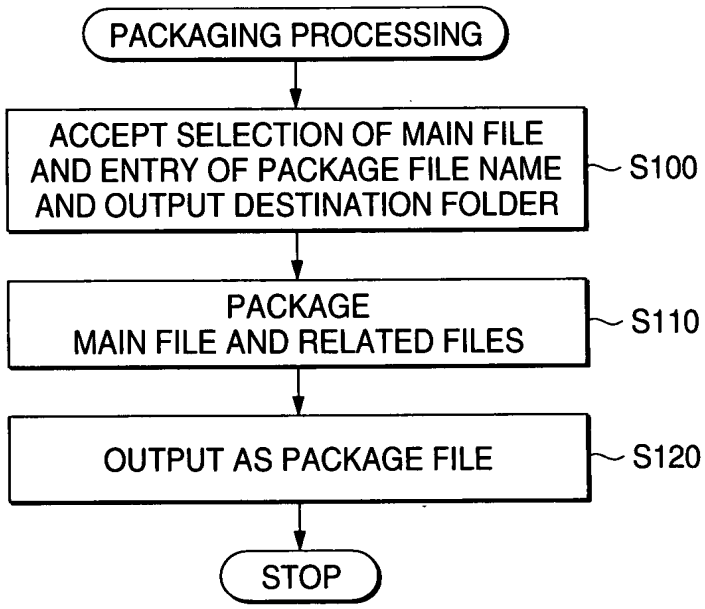


FIG. 2

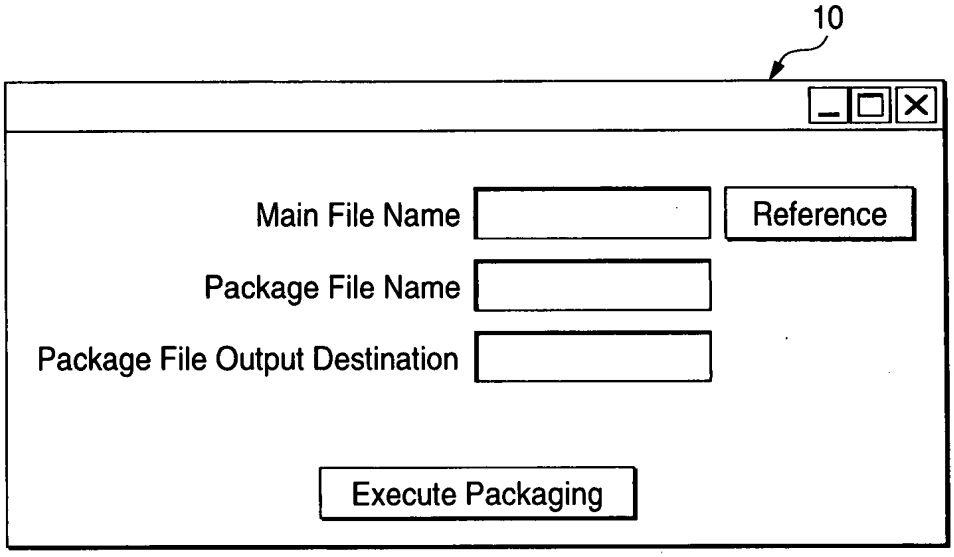

10
Main File Name
Reference
Package File Name
Package File Output Destination
Execute Packaging

FIG. 3

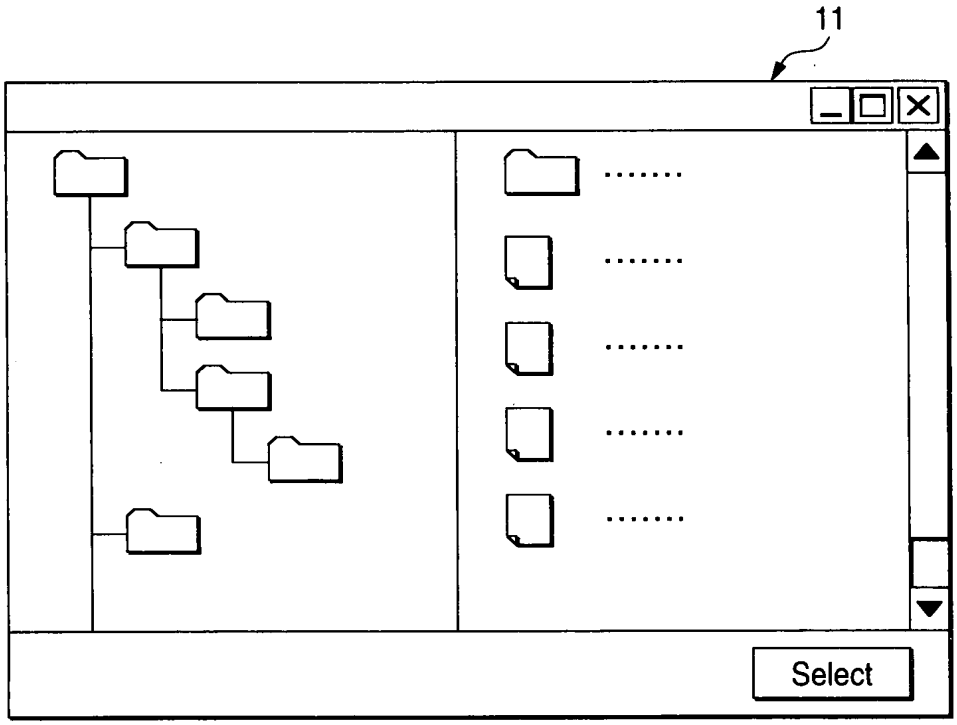

11
Select

FIG. 4

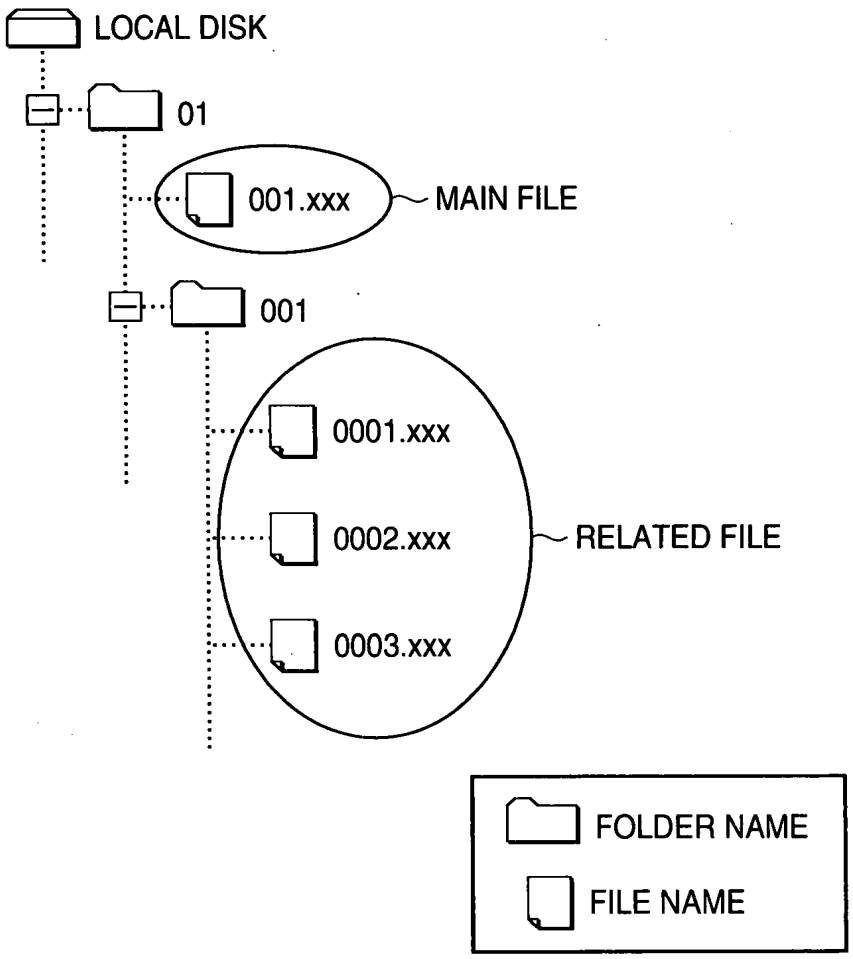

LOCAL DISK
01
001.xxx
MAIN FILE
001
0001.xxx
0002.xxx
0003.xxx
RELATED FILE
FOLDER NAME
FILE NAME

FIG. 5

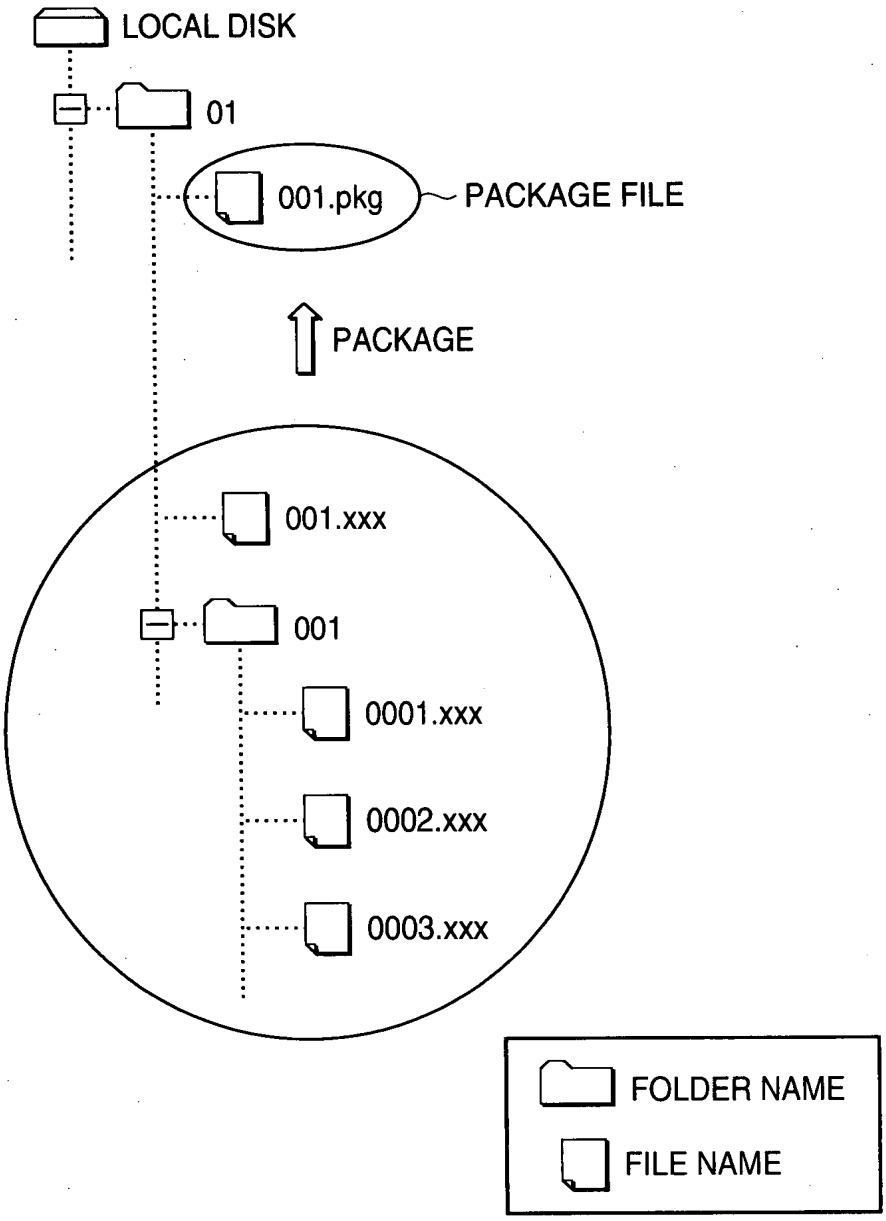

LOCAL DISK
01
001.pkg
PACKAGE FILE
PACKAGE
001.xxx
001
0001.xxx
0002.xxx
0003.xxx
FOLDER NAME
FILE NAME

FIG. 6

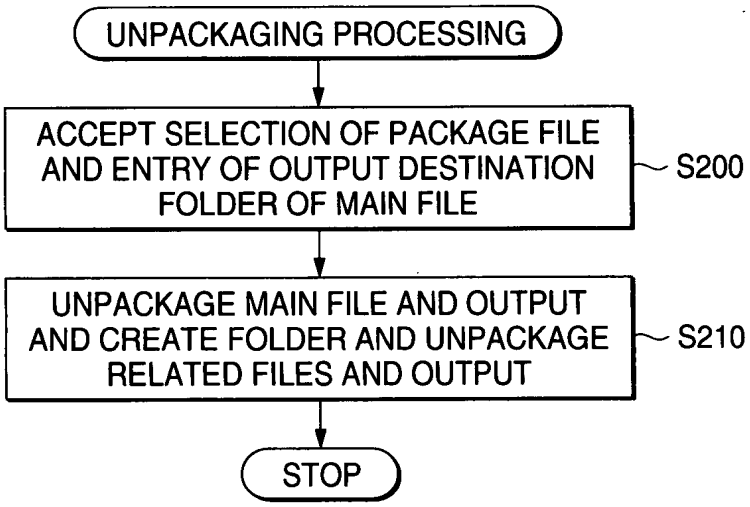

UNPACKAGING PROCESSING
ACCEPT SELECTION OF PACKAGE FILE AND ENTRY OF OUTPUT DESTINATION FOLDER OF MAIN FILE
S200
UNPACKAGE MAIN FILE AND OUTPUT AND CREATE FOLDER AND UNPACKAGE RELATED FILES AND OUTPUT
S210
STOP

FIG. 7

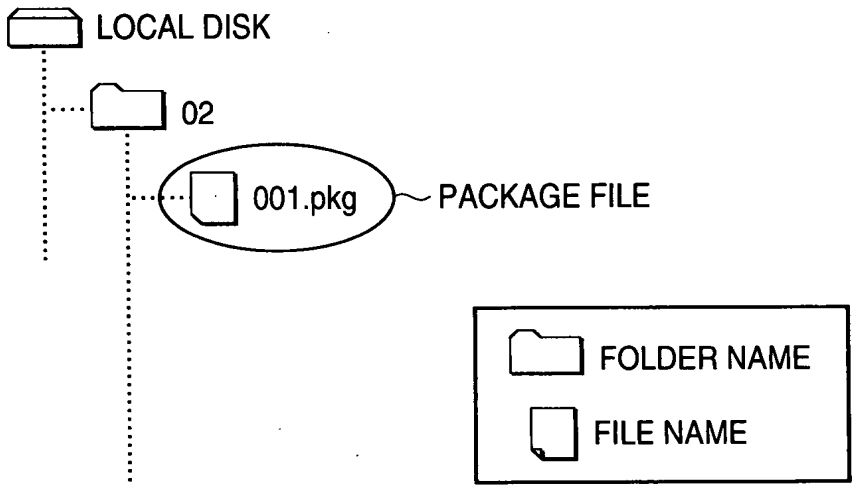


FIG. 8

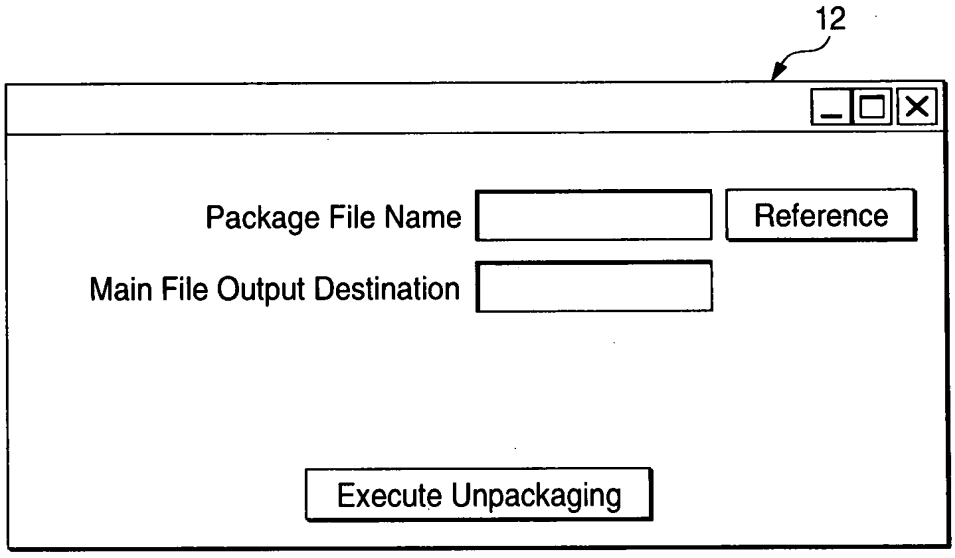

12
Package File Name
Reference
Main File Output Destination
Execute Unpackaging

FIG. 9

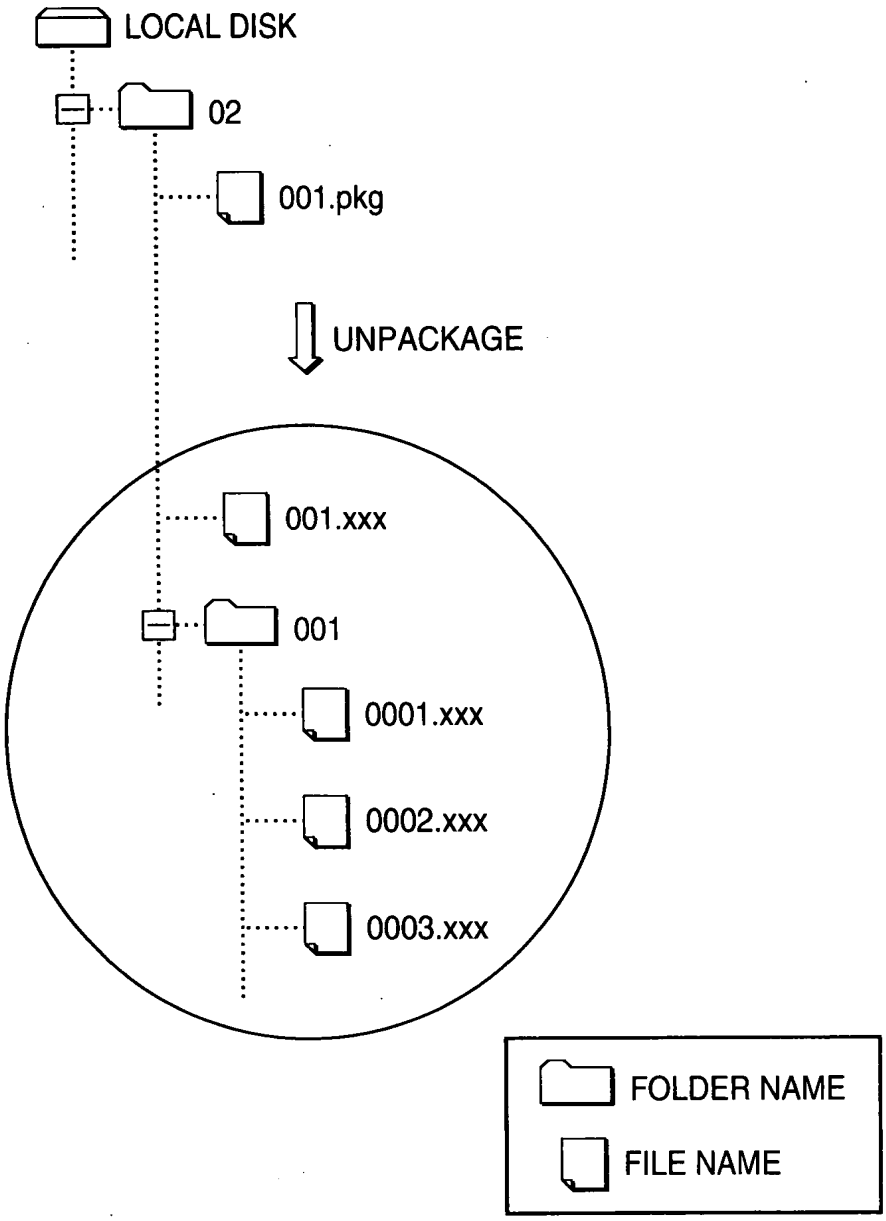

LOCAL DISK
02
001.pkg
UNPACKAGE
001.xxx
001
0001.xxx
0002.xxx
0003.xxx
FOLDER NAME
FILE NAME

FIG. 10

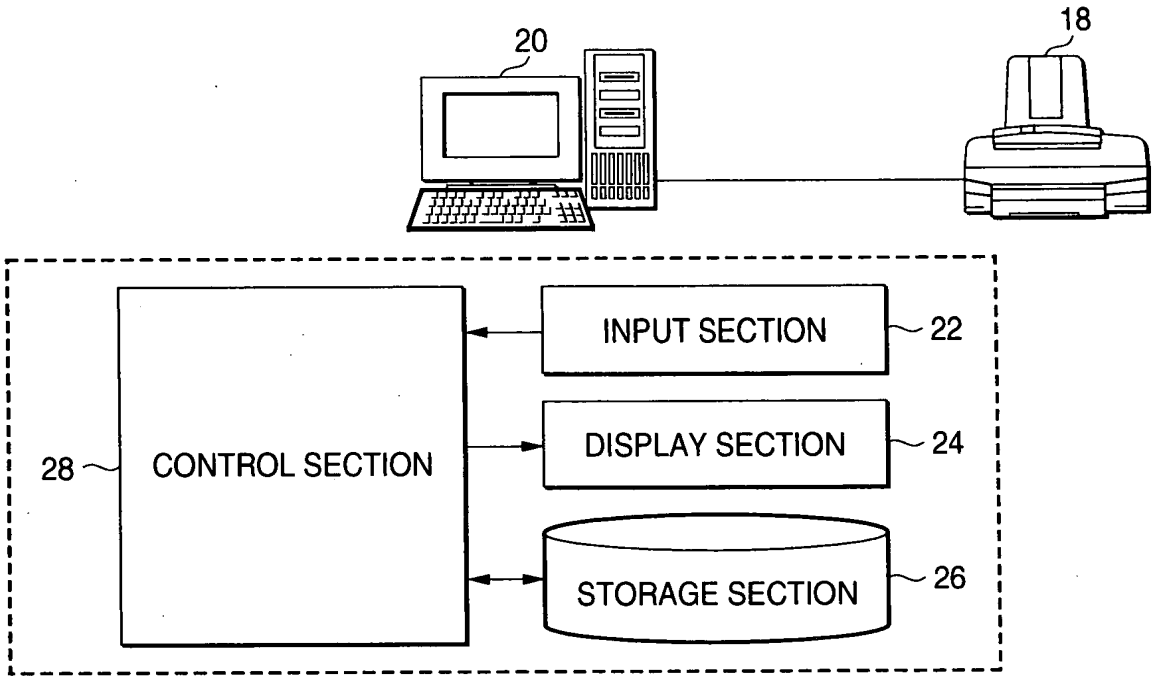

20
18
INPUT SECTION
22
28
CONTROL SECTION
DISPLAY SECTION
24
STORAGE SECTION
26

FIG. 11

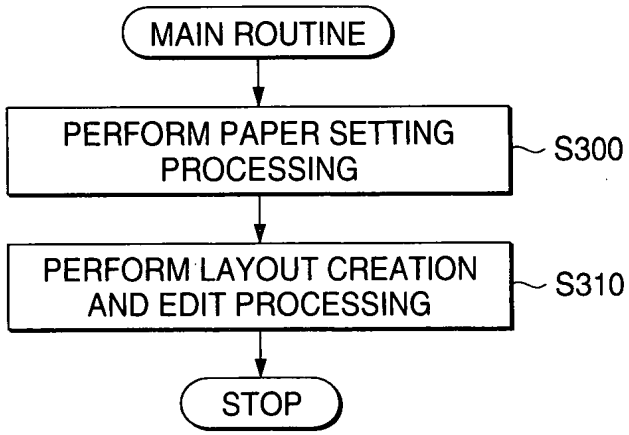

MAIN ROUTINE
PERFORM PAPER SETTING PROCESSING
S300
PERFORM LAYOUT CREATION AND EDIT PROCESSING
S310
STOP

FIG. 12

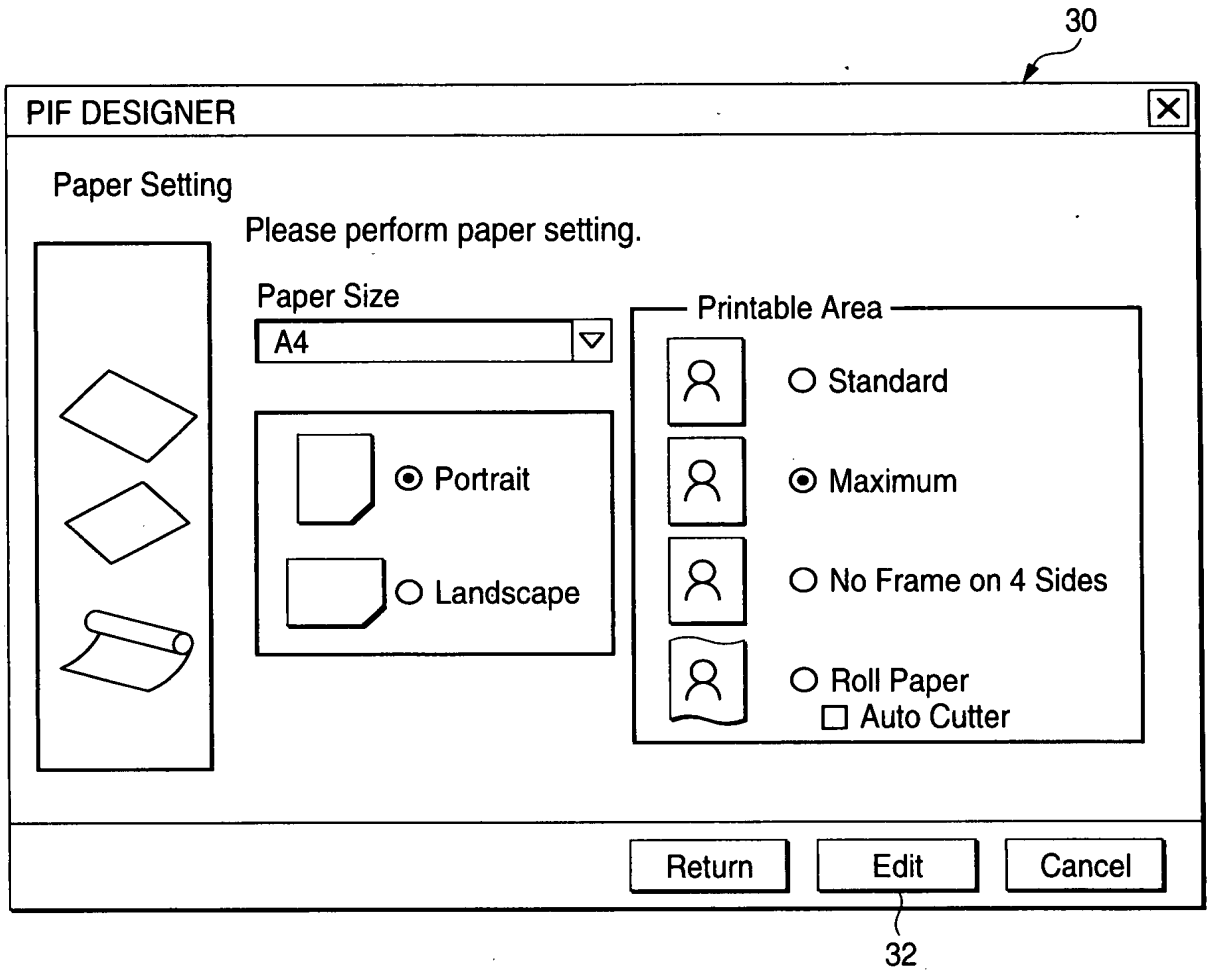

30
PIF DESIGNER
Paper Setting
Please perform paper setting.
Paper Size
A4
Portrait
Landscape
Printable Area
Standard
Maximum
No Frame on 4 Sides
Roll Paper
Auto Cutter
Return
Edit
Cancel
32

FIG. 13

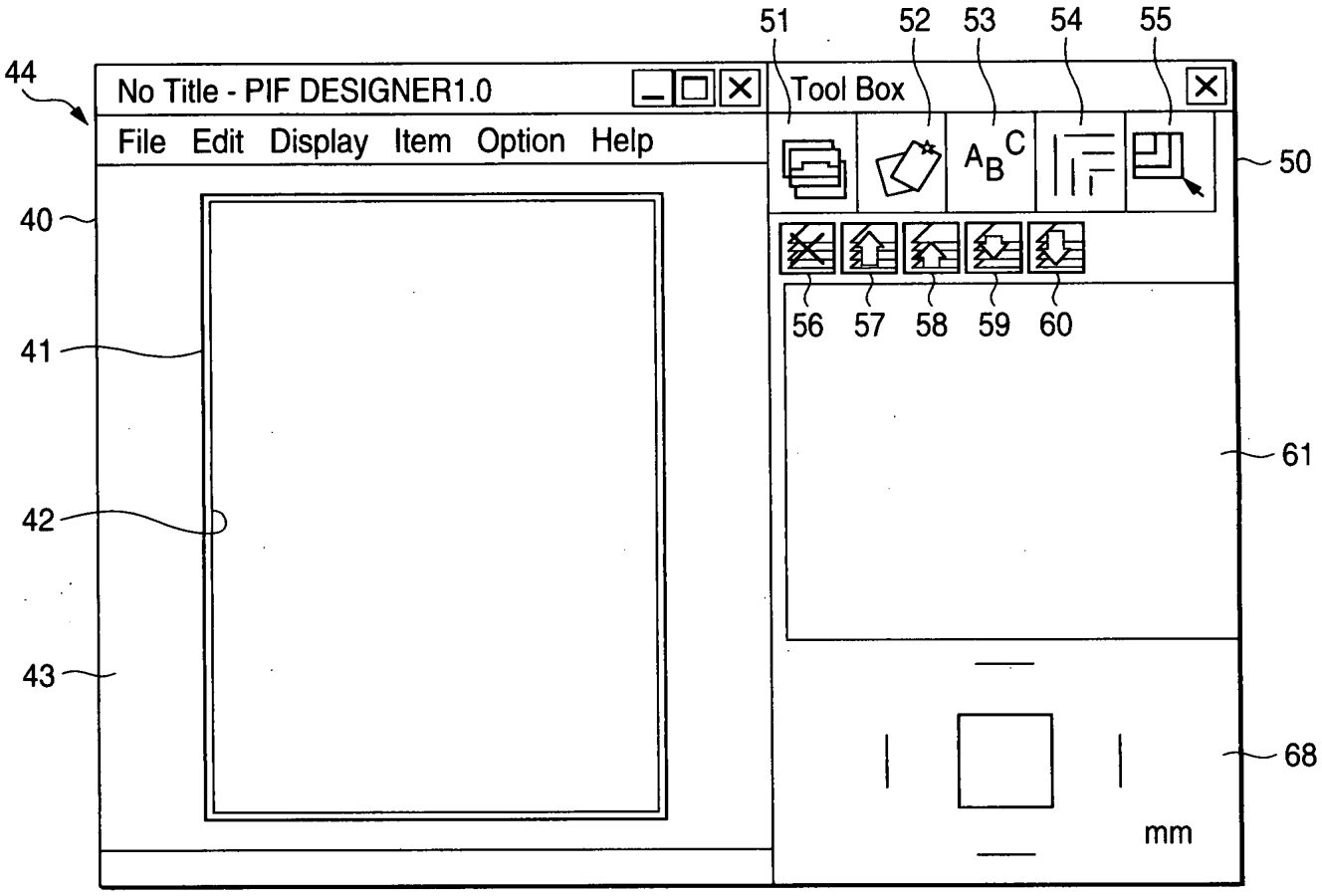

44
No Title - PIF DESIGNER1.0
File Edit Display Item Option Help
Tool Box
51
52
53
54
55
50
40
41
42
43
56
57
58
59
60
61
68
mm

FIG. 14

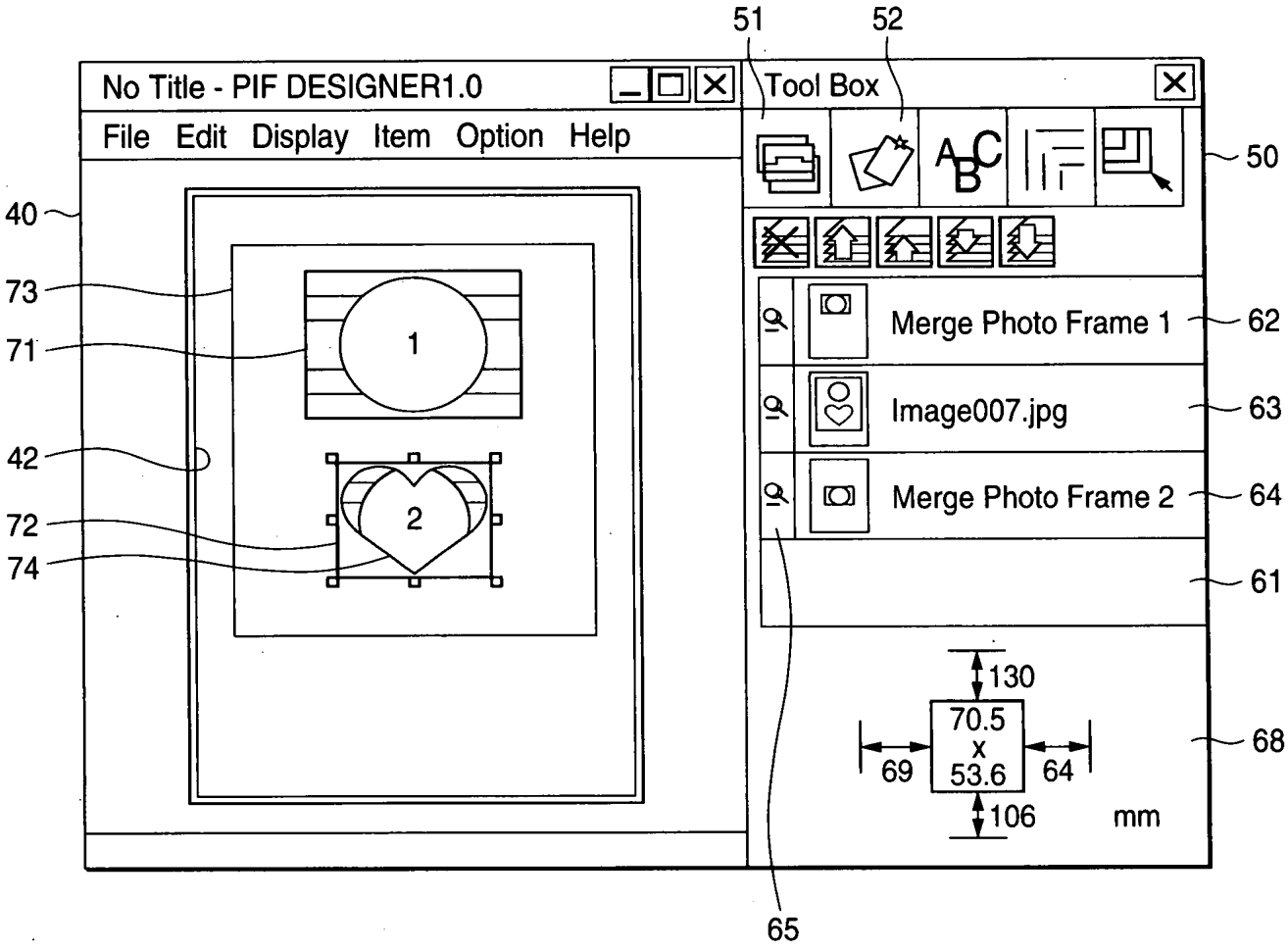

51
52
No Title - PIF DESIGNER1.0
File Edit Display Item Option Help
Tool Box
50
40
73
71
42
72
74
1
2
Merge Photo Frame 1
62
Image007.jpg
63
Merge Photo Frame 2
64
61
130
70.5
x
53.6
69
64
106
mm
68
65

FIG. 15

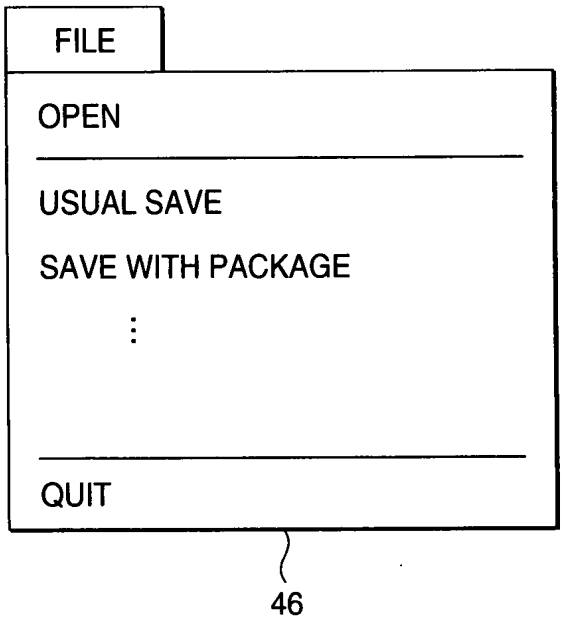


FIG. 16

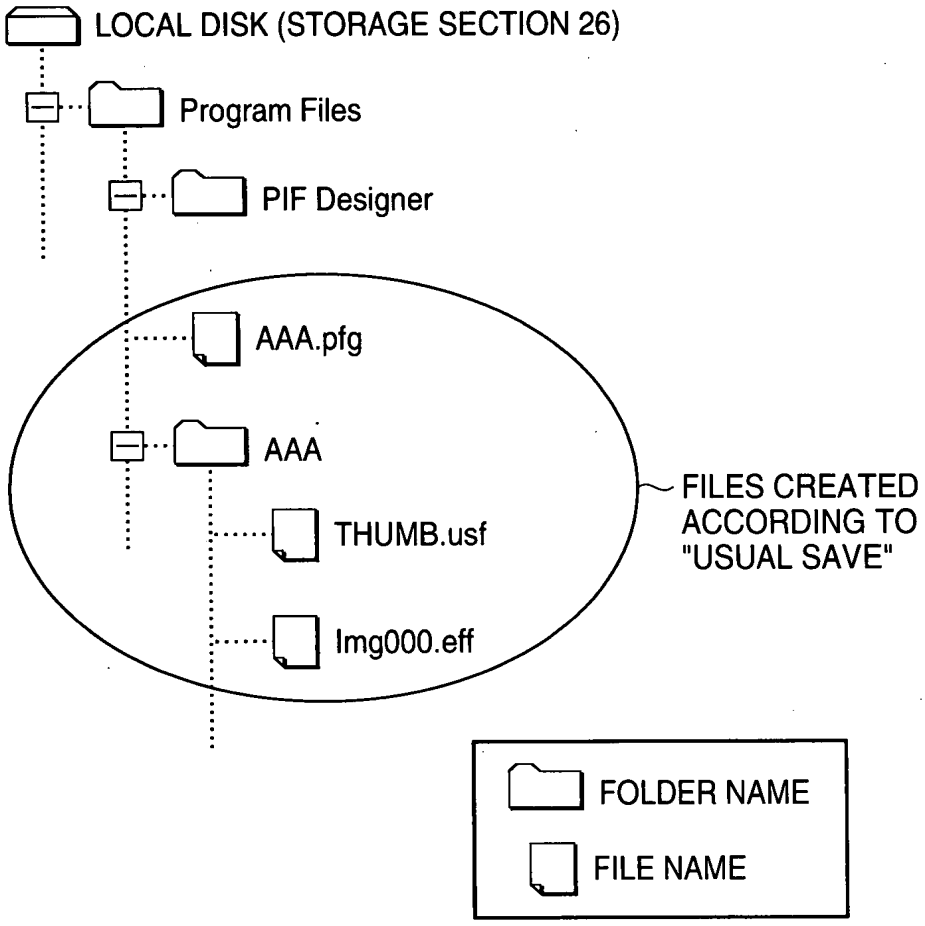

LOCAL DISK (STORAGE SECTION 26)
Program Files
PIF Designer
AAA.pfg
AAA
THUMB.usf
Img000.eff
FILES CREATED ACCORDING TO "USUAL SAVE"
FOLDER NAME
FILE NAME

FIG. 17

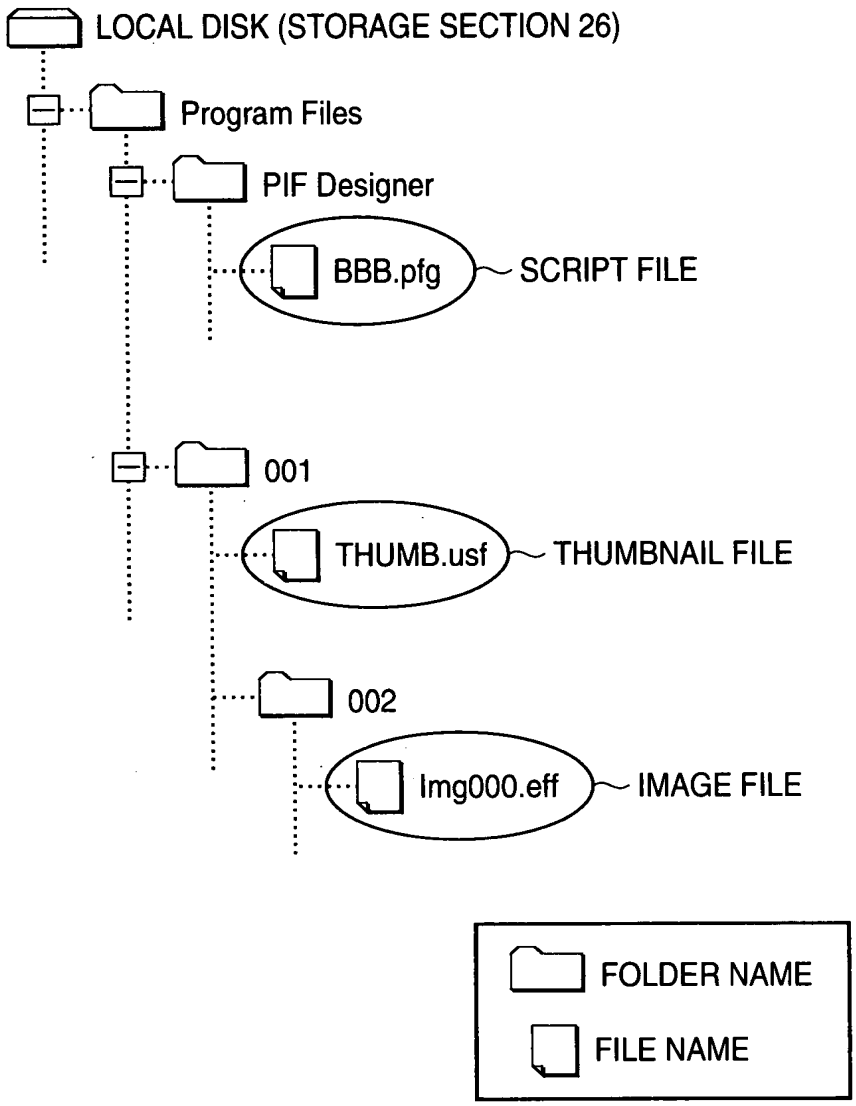

LOCAL DISK (STORAGE SECTION 26)
Program Files
PIF Designer
BBB.pfg
SCRIPT FILE
001
THUMB.usf
THUMBNAIL FILE
002
Img000.eff
IMAGE FILE
FOLDER NAME
FILE NAME

FIG. 18

```
[HEADER]
  HdRevision=02.10
  HdAuthor=""
  HdCopyright=""
  HdCopyFlag=Possible
  HdChangeFlag=Possible
  HdKeyWord=""
  HdTitle=""
  HdComment=""
  HdDirection=Vertical
  HdSound=""
  HdCapacity=735905
  HdThumbnail="C:¥Program Files¥001¥THUMB.USF"
  HdPhysicalPaperSize=A4
  HdMargines=42,42,42,42
  HdApplication=""

[PAGE]
  DrawPicture("",2,642,2062,2294,2904,0,1,4,0,0,0,0)
  DrawPicture("",1,579,768,2325,1705,0,1,4,0,0,0,0)
  DrawPicture("C:¥Program Files¥001¥002¥Image000.eff")
```

FILE NAME AND STORAGE FOLDER OF THUMBNAIL FILE

FILE NAME AND STORAGE FOLDER OF IMAGE FILE

FIG. 19 (A)

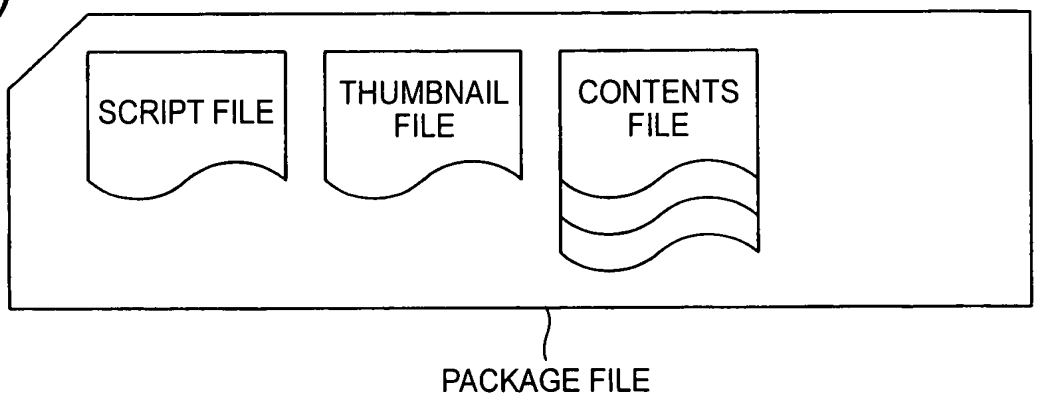


FIG. 19 (B)

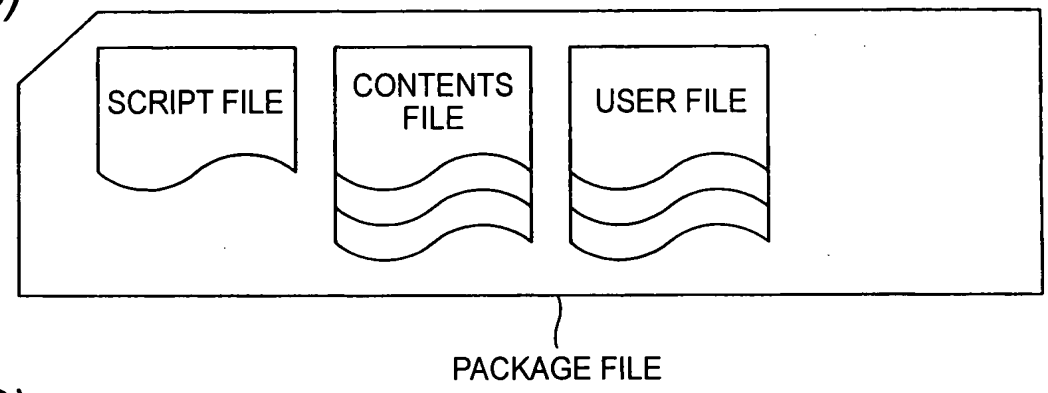


FIG. 19 (C)

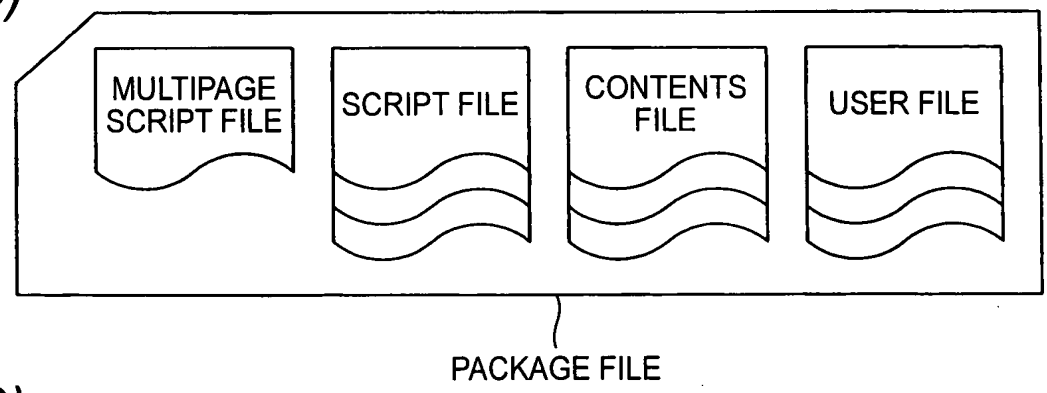


FIG. 19 (D)

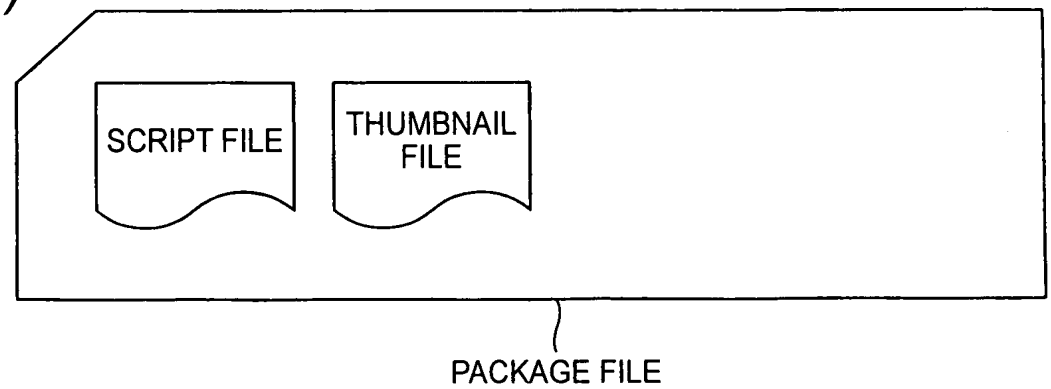


FIG. 20 (E)

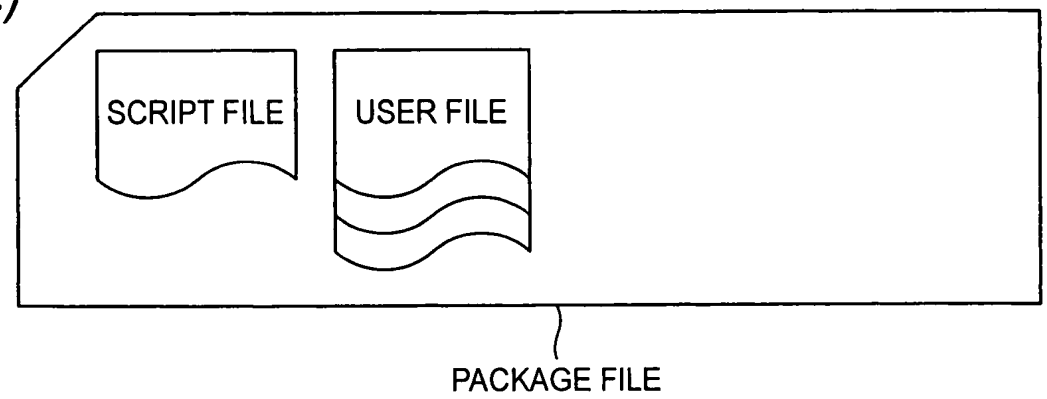


FIG. 20 (F)

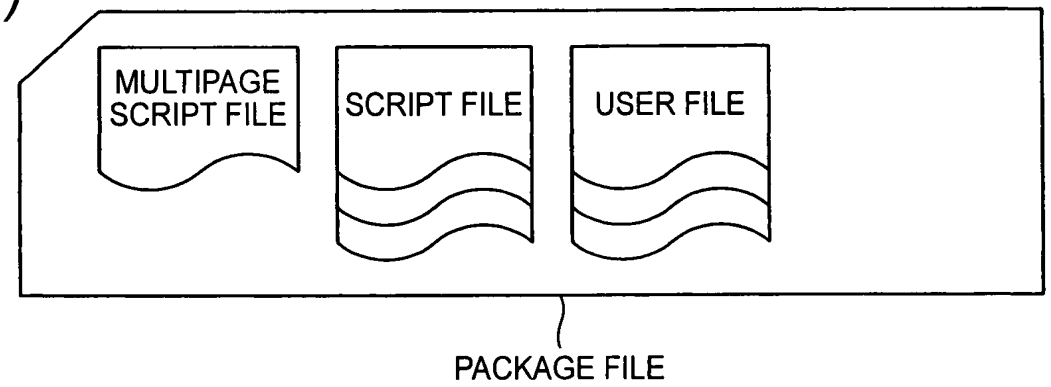


FIG. 20 (G)

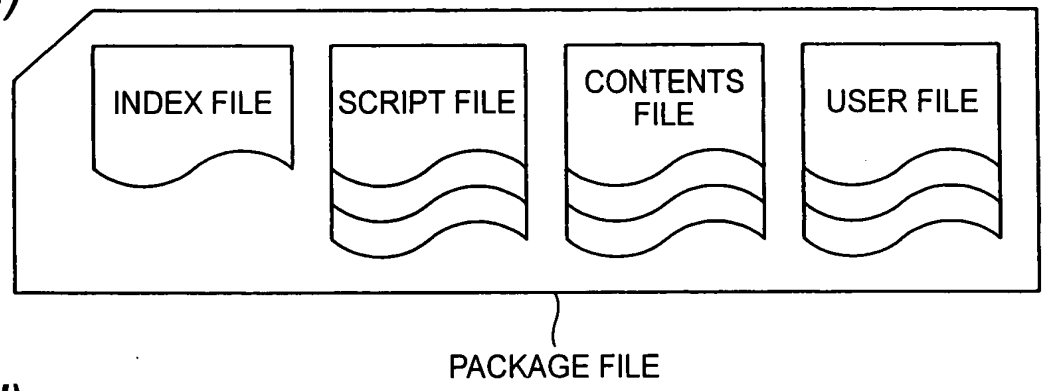


FIG. 20 (H)

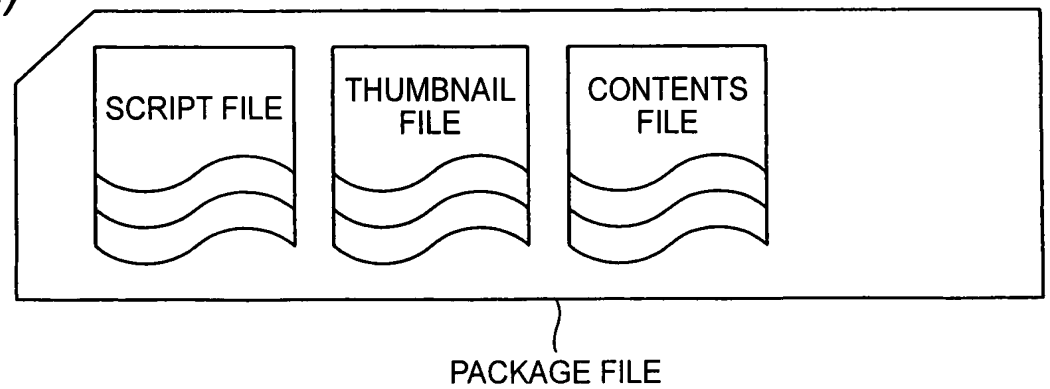


FIG. 21

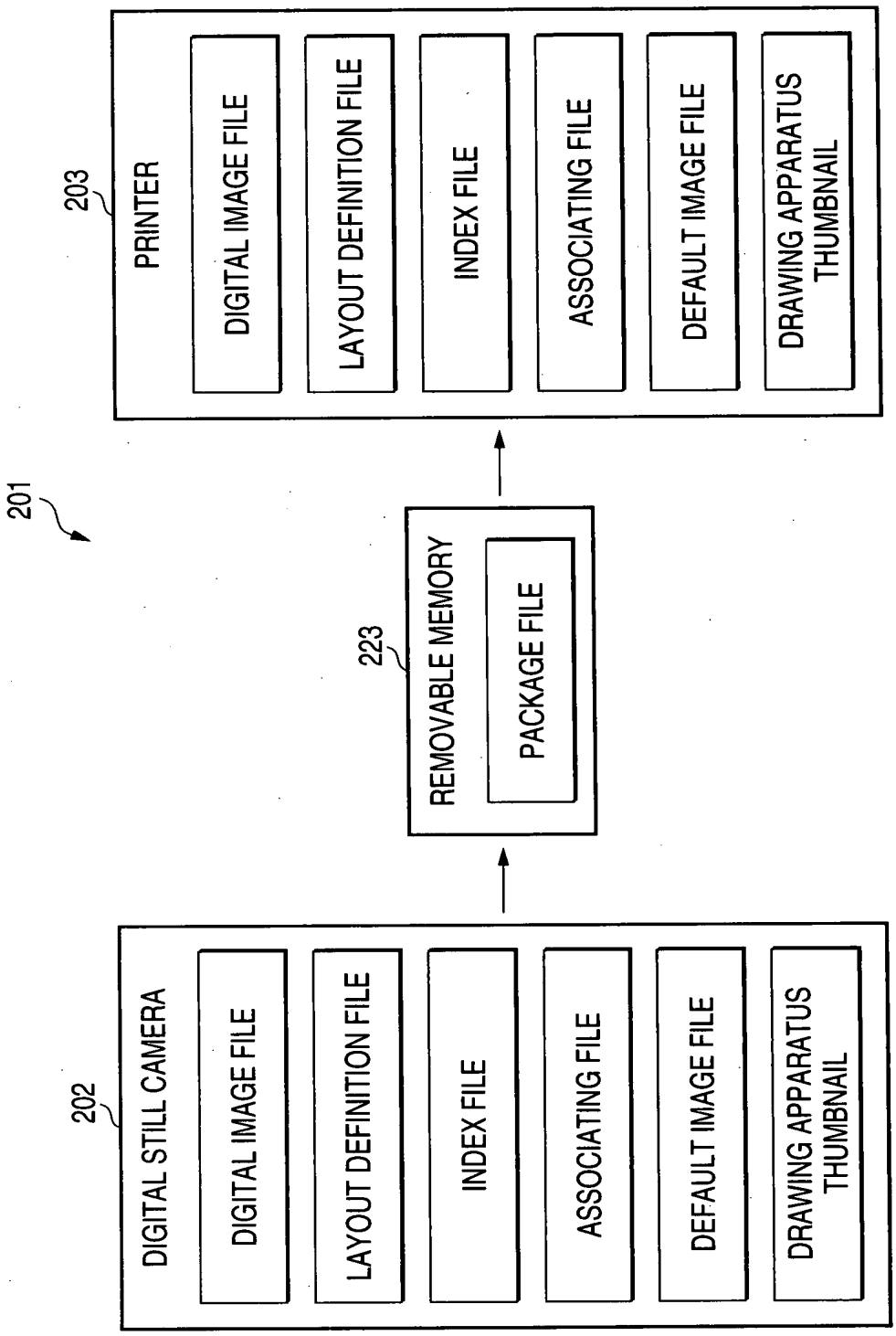

201
202
DIGITAL STILL CAMERA
DIGITAL IMAGE FILE
LAYOUT DEFINITION FILE
INDEX FILE
ASSOCIATING FILE
DEFAULT IMAGE FILE
DRAWING APPARATUS THUMBNAIL
223
REMOVABLE MEMORY
PACKAGE FILE
203
PRINTER
DIGITAL IMAGE FILE
LAYOUT DEFINITION FILE
INDEX FILE
ASSOCIATING FILE
DEFAULT IMAGE FILE
DRAWING APPARATUS THUMBNAIL

FIG. 22

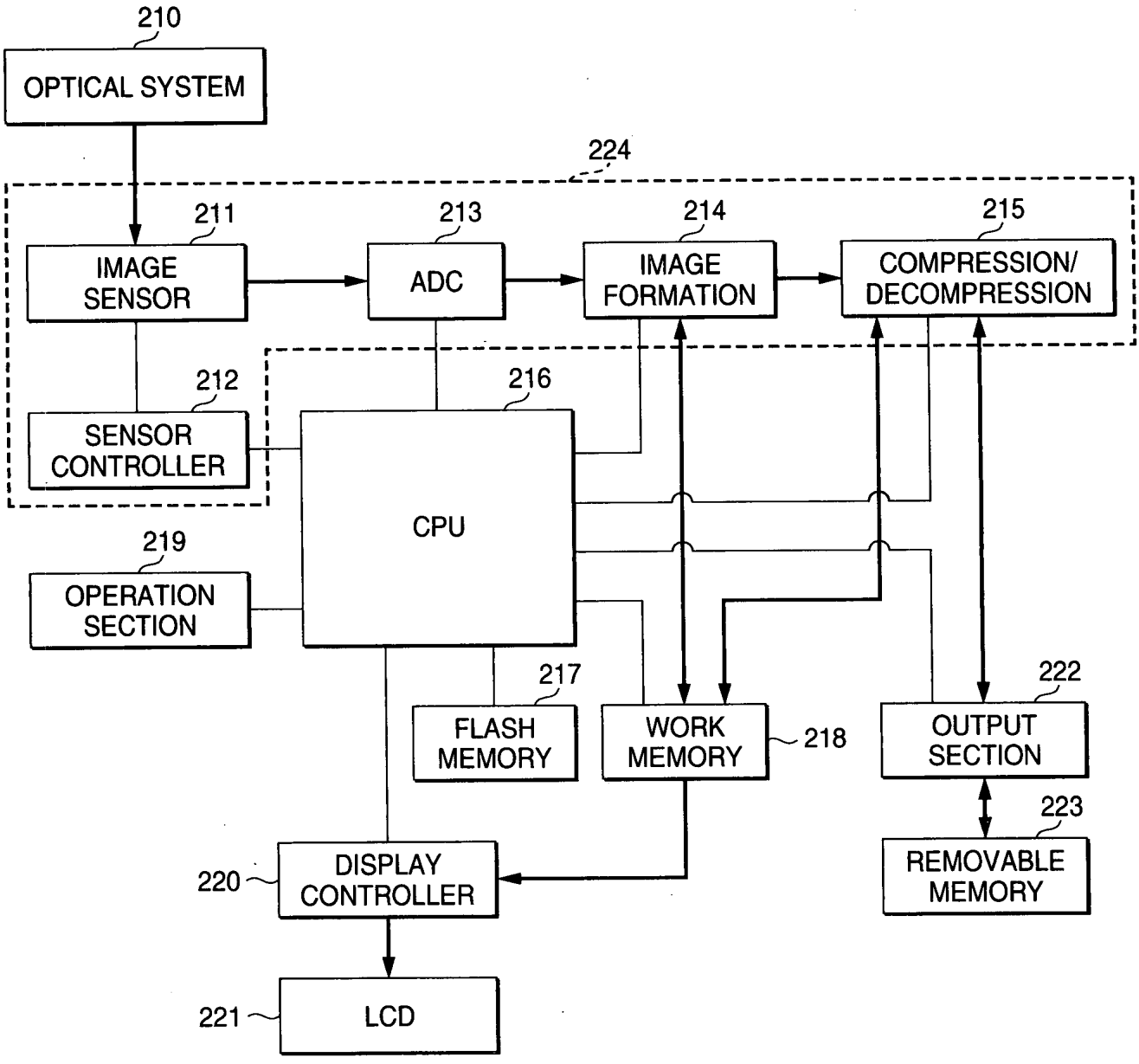

210
OPTICAL SYSTEM
224
211
IMAGE SENSOR
213
ADC
214
IMAGE FORMATION
215
COMPRESSION/ DECOMPRESSION
212
SENSOR CONTROLLER
216
CPU
219
OPERATION SECTION
217
FLASH MEMORY
WORK MEMORY
218
222
OUTPUT SECTION
223
REMOVABLE MEMORY
220
DISPLAY CONTROLLER
221
LCD

FIG. 23 (A)

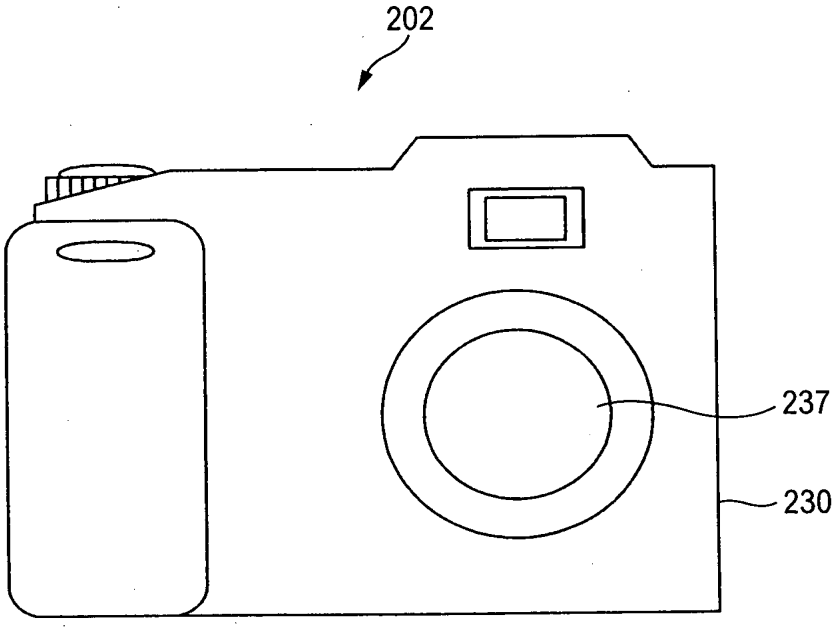


FIG. 23 (B)

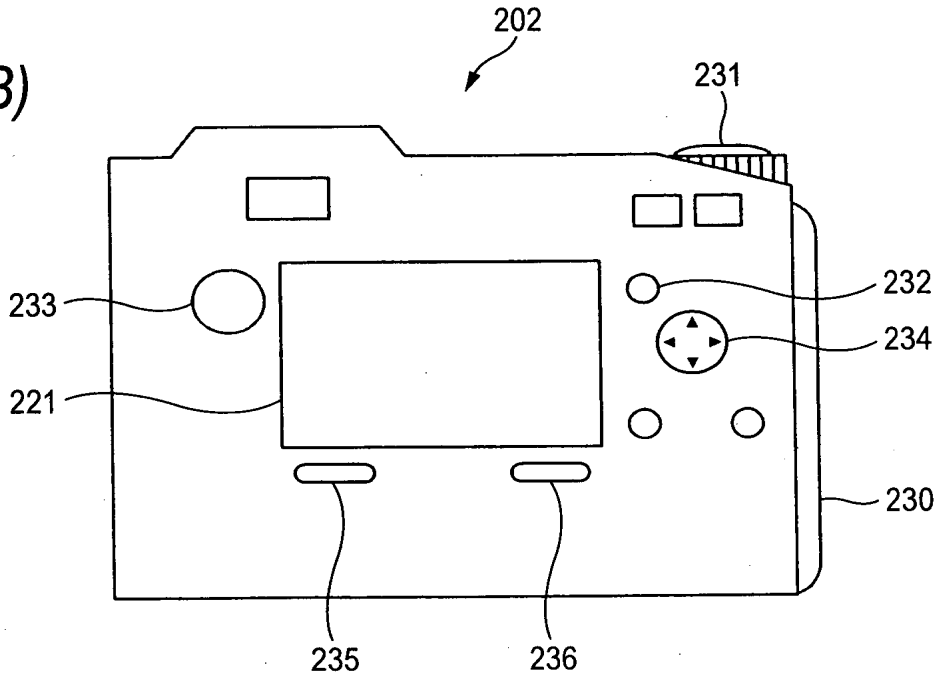


FIG. 24 (A)

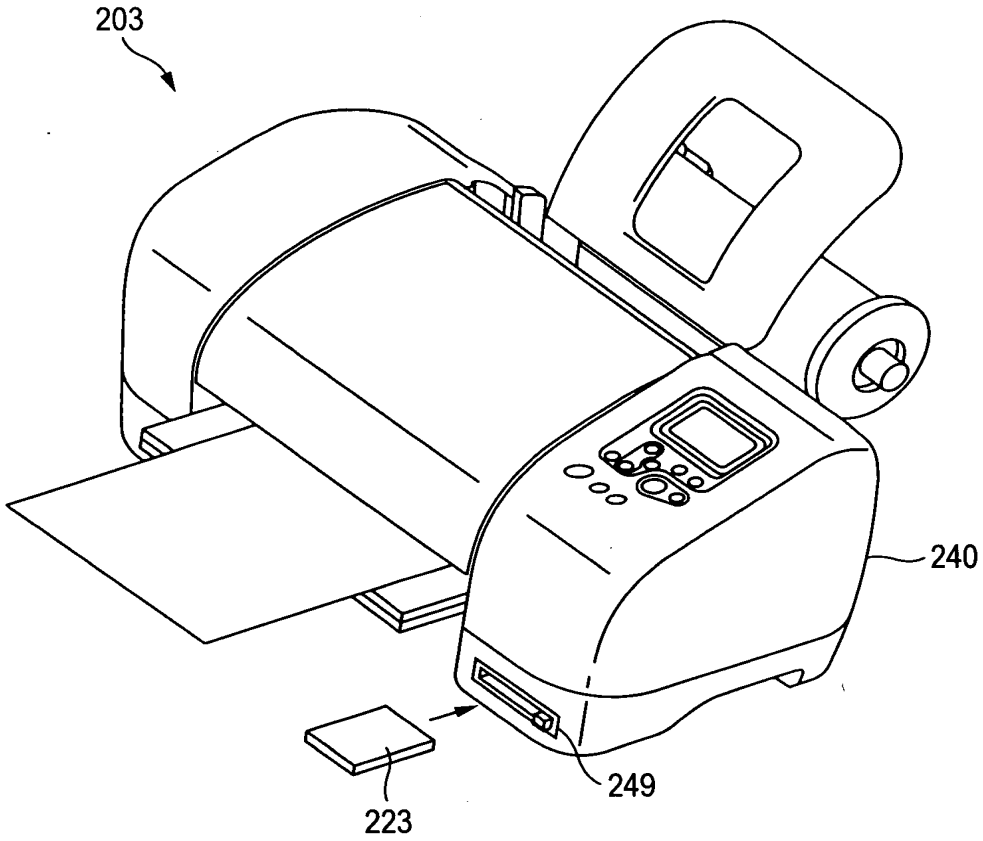


FIG. 24 (B)

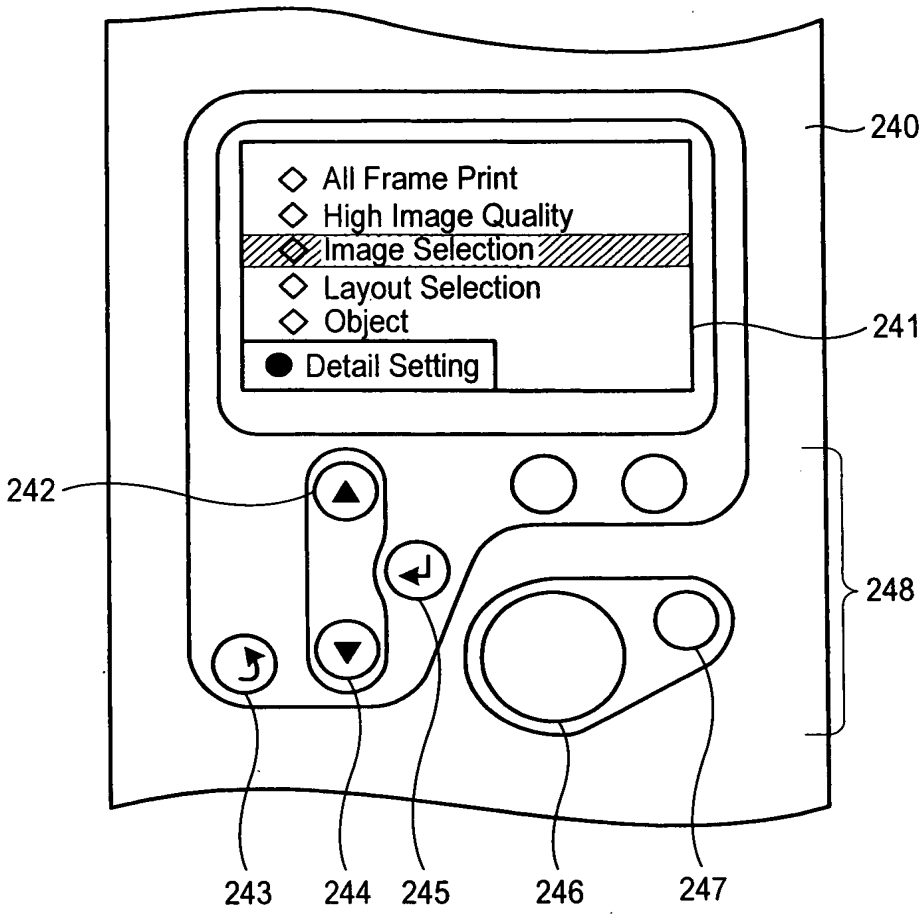

240
All Frame Print
High Image Quality
Image Selection
Layout Selection
Object
Detail Setting
241
242
248
243
244
245
246
247

FIG. 25

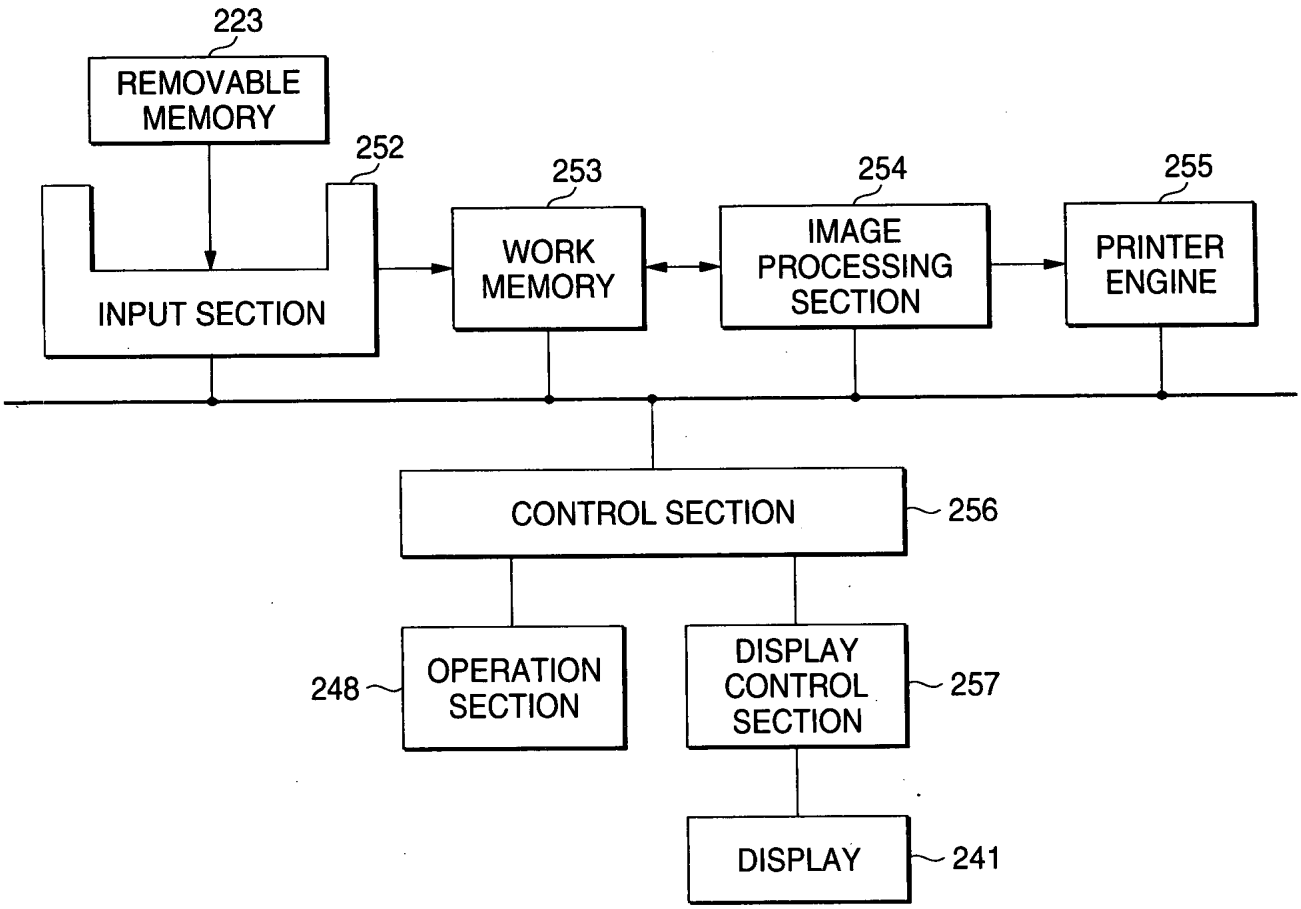

223
REMOVABLE MEMORY
252
INPUT SECTION
253
WORK MEMORY
254
IMAGE PROCESSING SECTION
255
PRINTER ENGINE
CONTROL SECTION
256
248
OPERATION SECTION
DISPLAY CONTROL SECTION
257
DISPLAY
241

FIG. 26

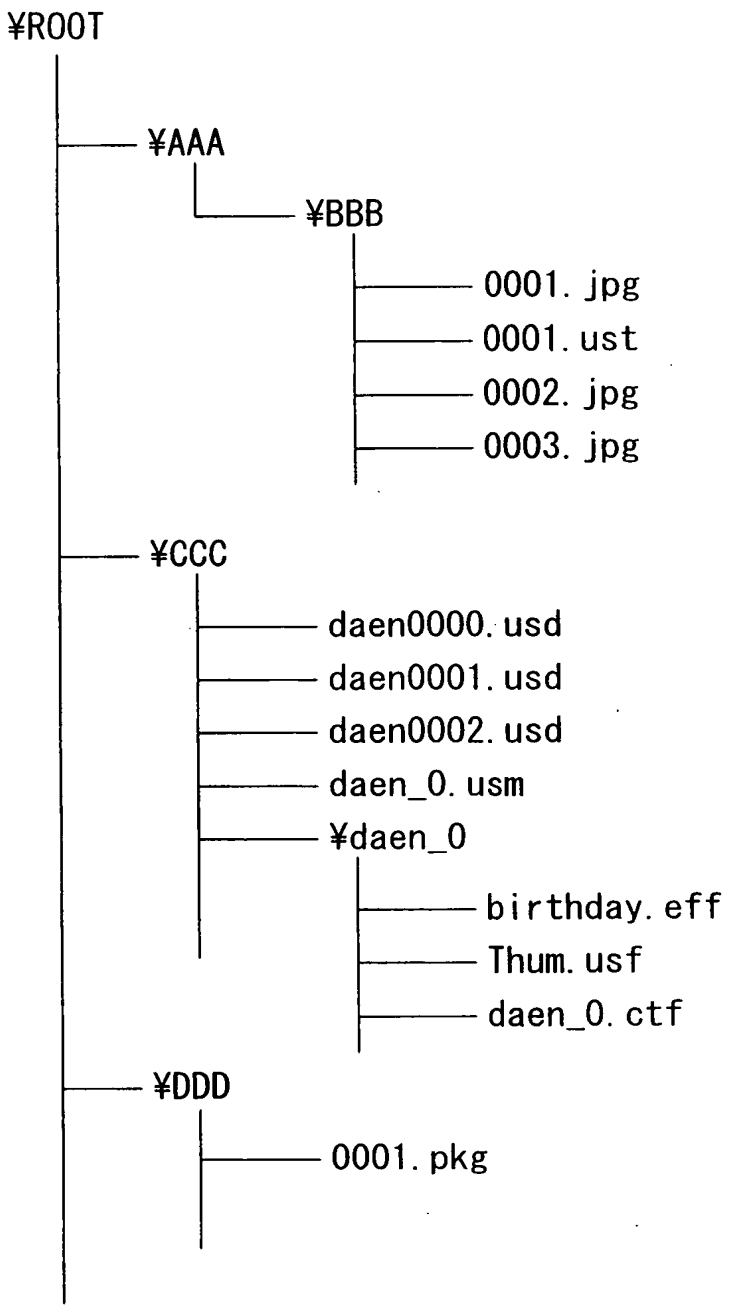

¥ROOT
¥AAA
¥BBB
0001. jpg
0001. ust
0002. jpg
0003. jpg
¥CCC
daen0000. usd
daen0001. usd
daen0002. usd
daen_0. usm
¥daen_0
birthday. eff
Thum. usf
daen_0. ctf
¥DDD
0001. pkg

FIG. 27

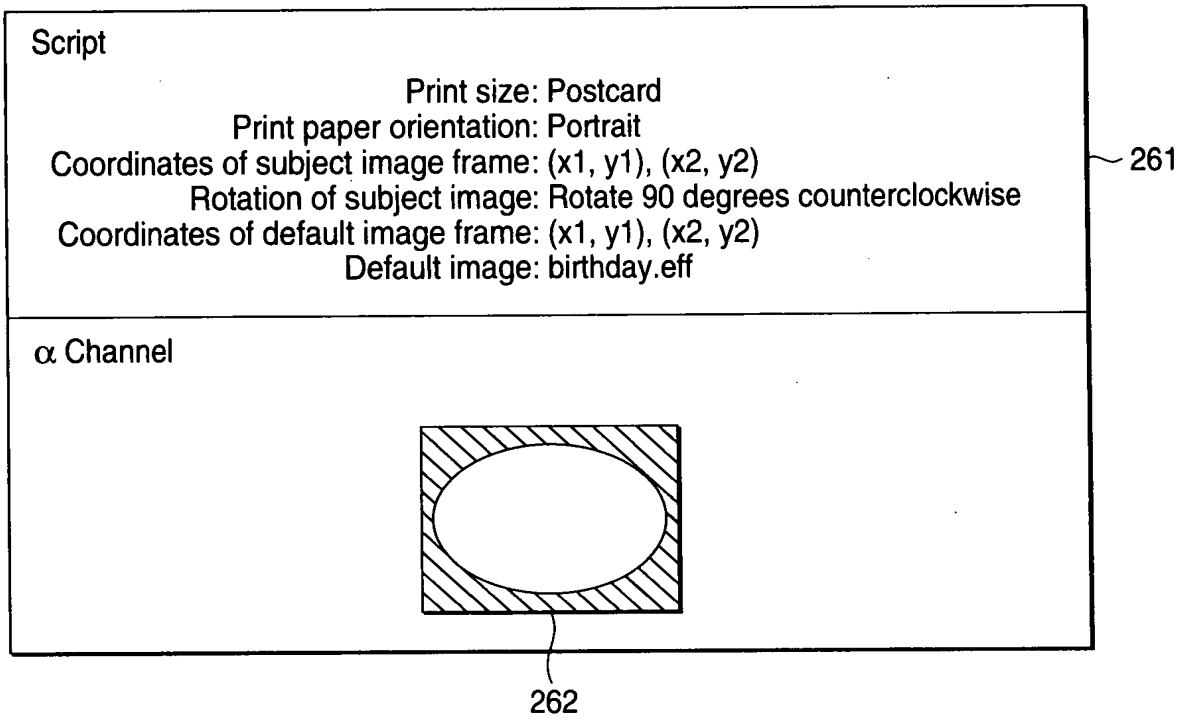

Script
Print size: Postcard
Print paper orientation: Portrait
Coordinates of subject image frame: (x1, y1), (x2, y2)
Rotation of subject image: Rotate 90 degrees counterclockwise
Coordinates of default image frame: (x1, y1), (x2, y2)
Default image: birthday.eff
261
α Channel
262

FIG. 28 (A)

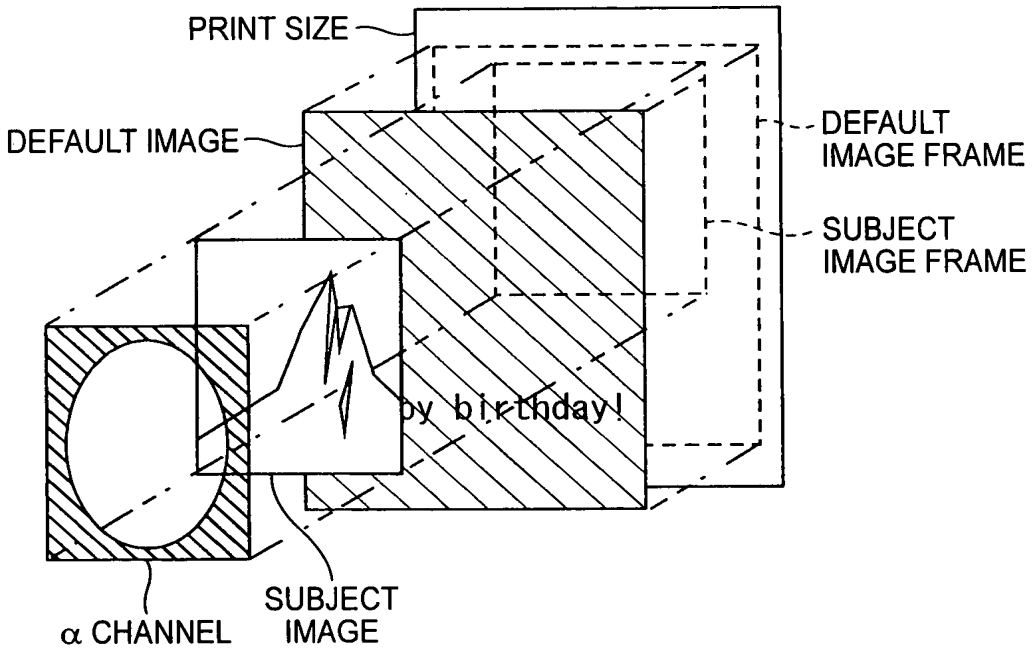


FIG. 28 (B)

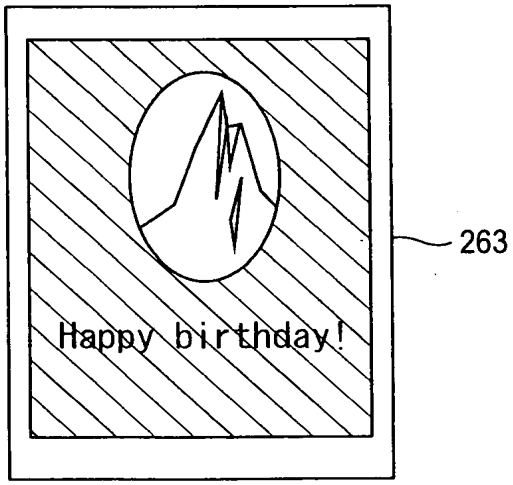


FIG. 29

HEADER SECTION		HEADER INFORMATION
IFD SECTION	0TH IFD	ACCESS INFORMATION TO LAYOUT DEFINITION FILE
	1ST IFD	ACCESS INFORMATION TO INDEX FILE, ETC.
	2ND IFD	ACCESS INFORMATION TO DRAWING APPARATUS THUMBNAIL
	3RD IFD	ACCESS INFORMATION TO DEFAULT IMAGE
	4TH IFD	ACCESS INFORMATION TO DIGITAL IMAGE FILE
USD SECTION		LAYOUT DEFINITION FILE 1 ⋮ LAYOUT DEFINITION FILE N
ADDITIONAL INFORMATION SECTION		INDEX FILE 1 ⋮ INDEX FILE N ASSOCIATING FILE 1 ⋮ ASSOCIATING FILE N
THUMBNAIL SECTION		DRAWING APPARATUS THUMBNAIL 1 ⋮ DRAWING APPARATUS THUMBNAIL N
EFF SECTION		DEFAULT IMAGE FILE 1 ⋮ DEFAULT IMAGE FILE N
JPG SECTION		DIGITAL IMAGE FILE 1 ⋮ DIGITAL IMAGE FILE N

FIG. 30 (A)

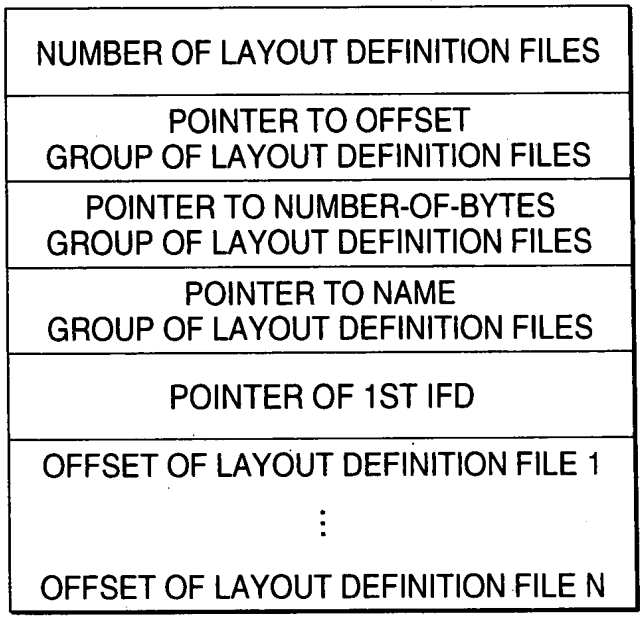


FIG. 30 (B)

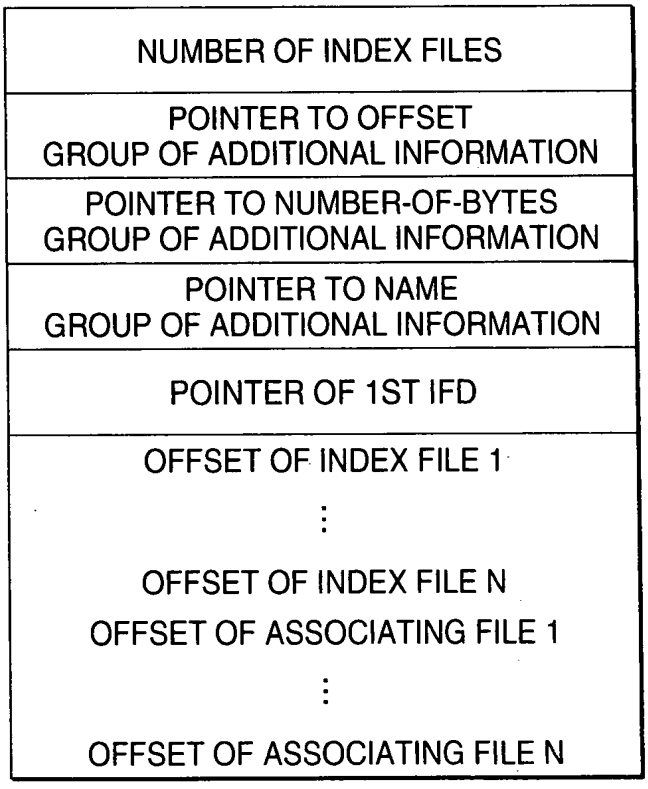


FIG. 31 (C)

NUMBER OF DRAWING APPARATUS THUMBNAIL FILES
POINTER TO OFFSET GROUP OF DRAWING APPARATUS THUMBNAIL FILES
POINTER TO NUMBER-OF-BYTES GROUP OF DRAWING APPARATUS THUMBNAIL FILES
POINTER TO NAME GROUP OF DRAWING APPARATUS THUMBNAIL FILES
POINTER OF 1ST IFD
OFFSET OF DRAWING APPARATUS THUMBNAIL FILE 1 ⋮ OFFSET OF DRAWING APPARATUS THUMBNAIL FILE N

FIG. 31 (D)

NUMBER OF DEFAULT IMAGE FILES
POINTER TO OFFSET GROUP OF DEFAULT IMAGE FILES
POINTER TO NUMBER-OF-BYTES GROUP OF DEFAULT IMAGE FILES
POINTER TO NAME GROUP OF DEFAULT IMAGE FILES
POINTER OF 1ST IFD
OFFSET OF DEFAULT IMAGE FILE 1 ⋮ OFFSET OF DEFAULT IMAGE FILE N

FIG. 32 (E)

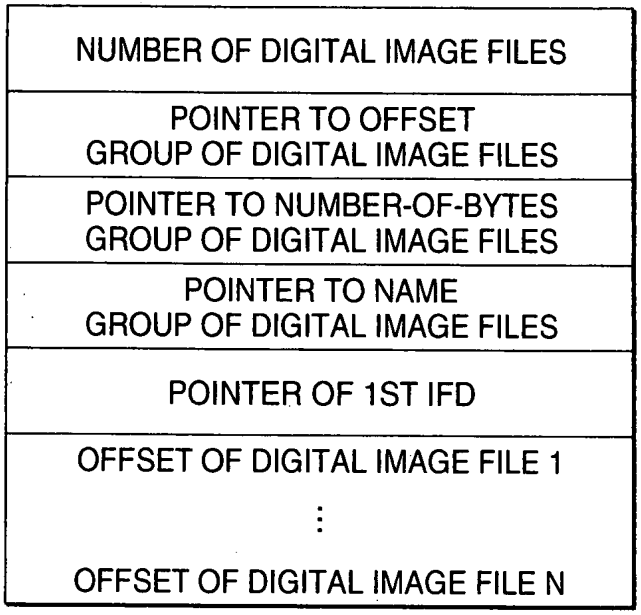

NUMBER OF DIGITAL IMAGE FILES
POINTER TO OFFSET GROUP OF DIGITAL IMAGE FILES
POINTER TO NUMBER-OF-BYTES GROUP OF DIGITAL IMAGE FILES
POINTER TO NAME GROUP OF DIGITAL IMAGE FILES
POINTER OF 1ST IFD
OFFSET OF DIGITAL IMAGE FILE 1
OFFSET OF DIGITAL IMAGE FILE N

FIG. 33

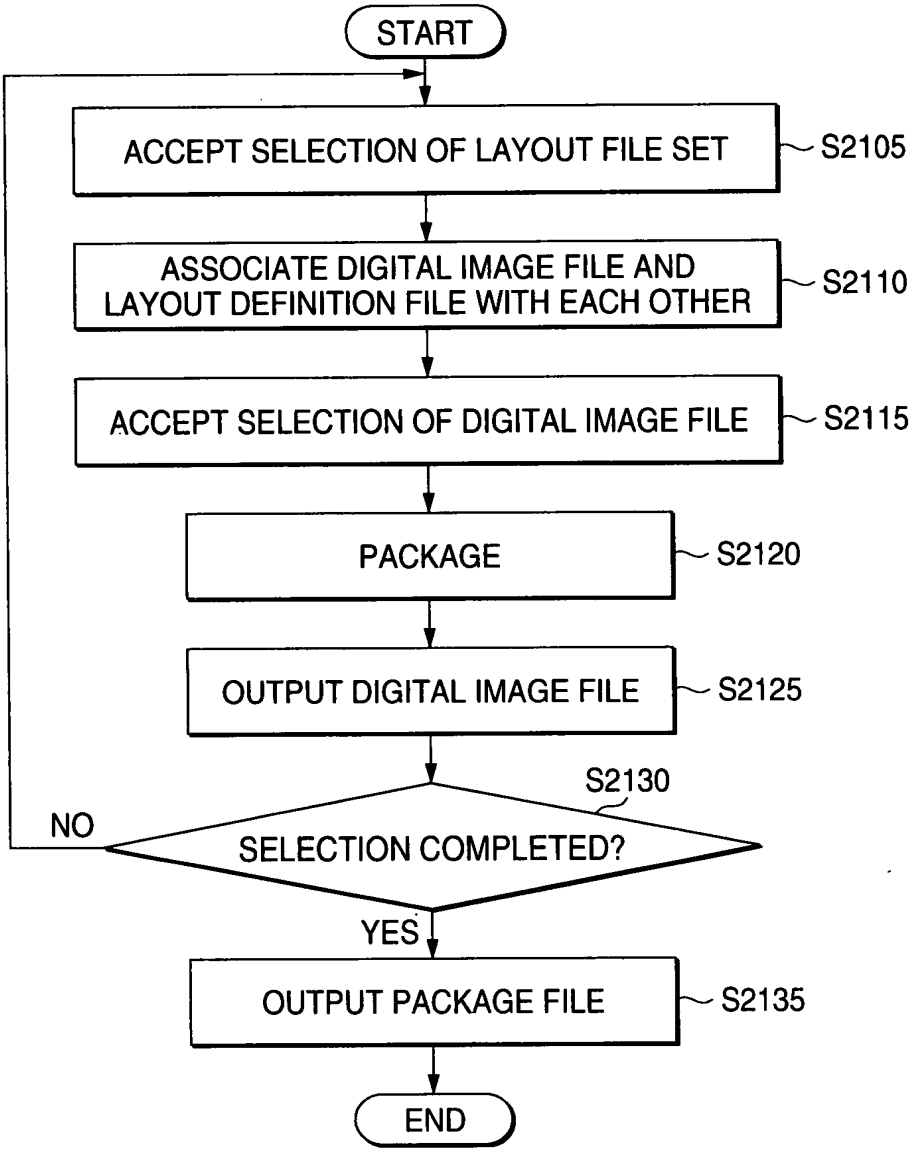

START
ACCEPT SELECTION OF LAYOUT FILE SET
S2105
ASSOCIATE DIGITAL IMAGE FILE AND LAYOUT DEFINITION FILE WITH EACH OTHER
S2110
ACCEPT SELECTION OF DIGITAL IMAGE FILE
S2115
PACKAGE
S2120
OUTPUT DIGITAL IMAGE FILE
S2125
S2130
NO
SELECTION COMPLETED?
YES
OUTPUT PACKAGE FILE
S2135
END

FIG. 34 (A)

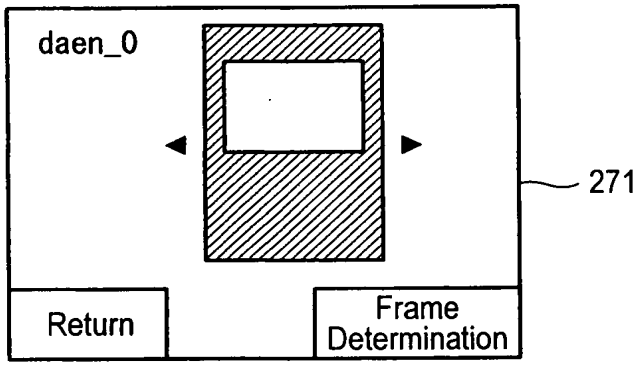


FIG. 34 (B)

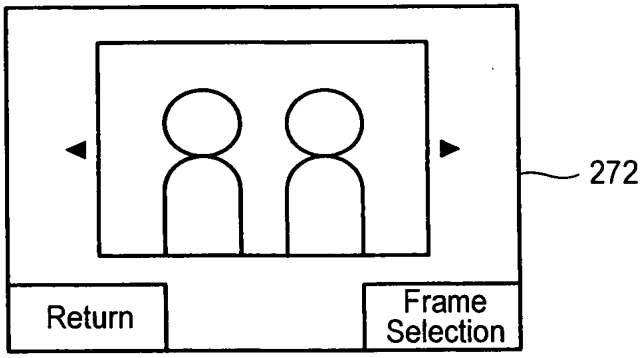


FIG. 35

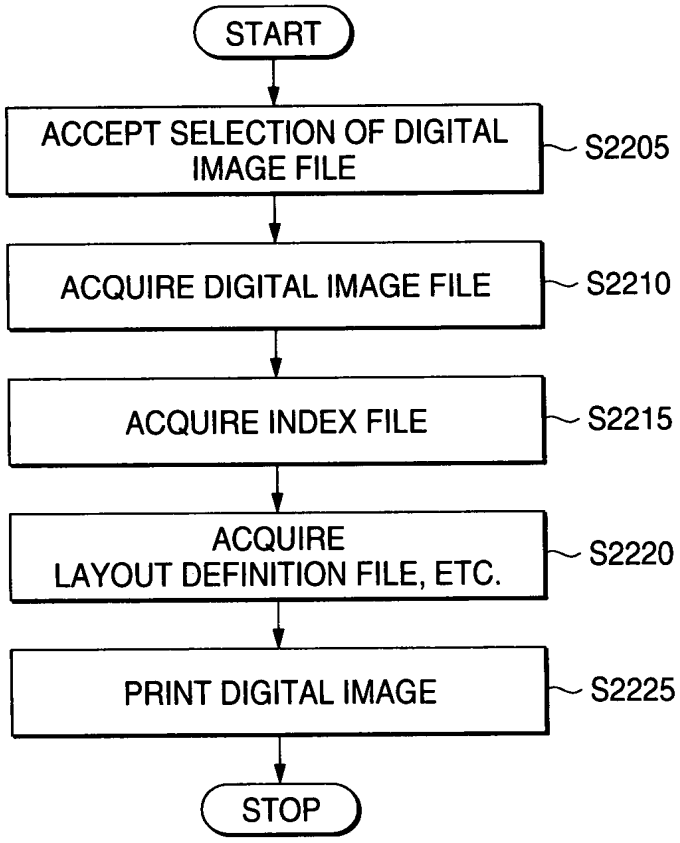

START
ACCEPT SELECTION OF DIGITAL IMAGE FILE
S2205
ACQUIRE DIGITAL IMAGE FILE
S2210
ACQUIRE INDEX FILE
S2215
ACQUIRE LAYOUT DEFINITION FILE, ETC.
S2220
PRINT DIGITAL IMAGE
S2225
STOP

FIG. 36

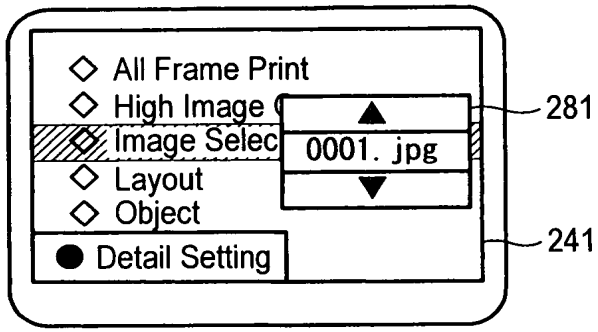

All Frame Print
High Image
Image Selec
Layout
Object
Detail Setting
0001. jpg
281
241

FIG. 37

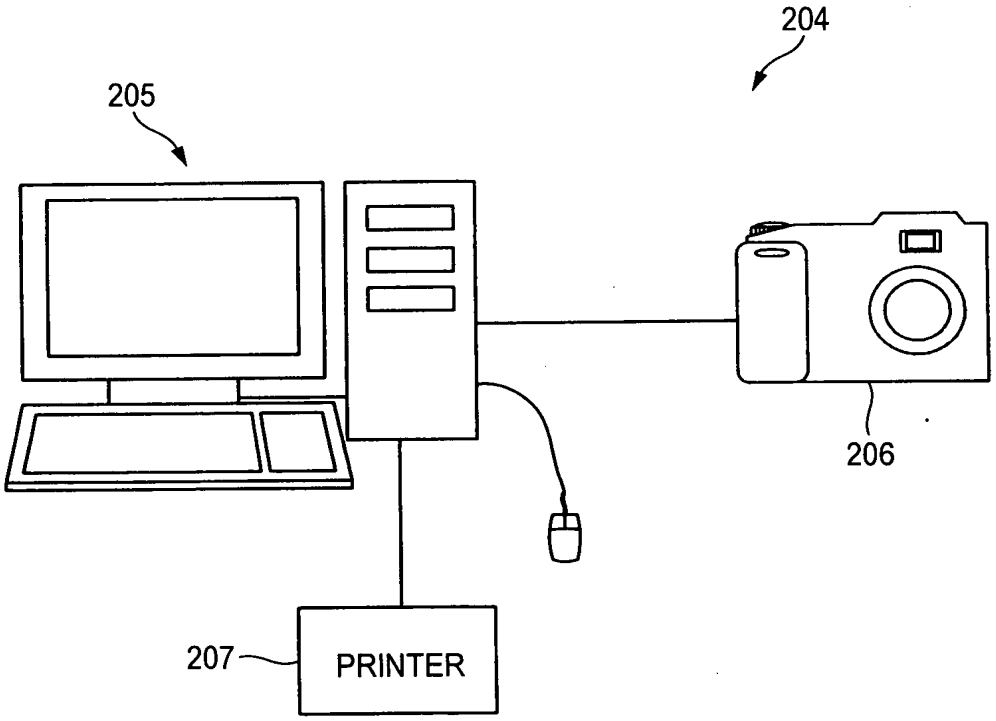


FIG. 38

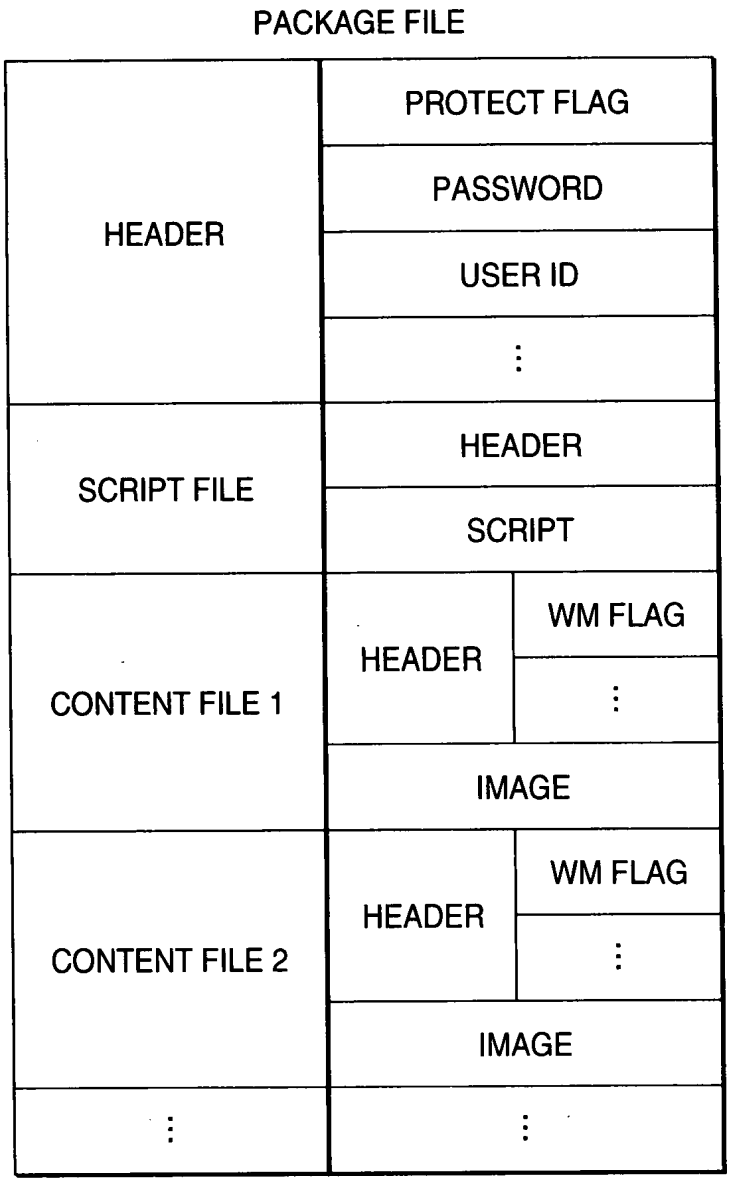

PACKAGE FILE
HEADER
PROTECT FLAG
PASSWORD
USER ID
SCRIPT FILE
HEADER
SCRIPT
CONTENT FILE 1
HEADER
WM FLAG
IMAGE
CONTENT FILE 2
HEADER
WM FLAG
IMAGE

FIG. 39

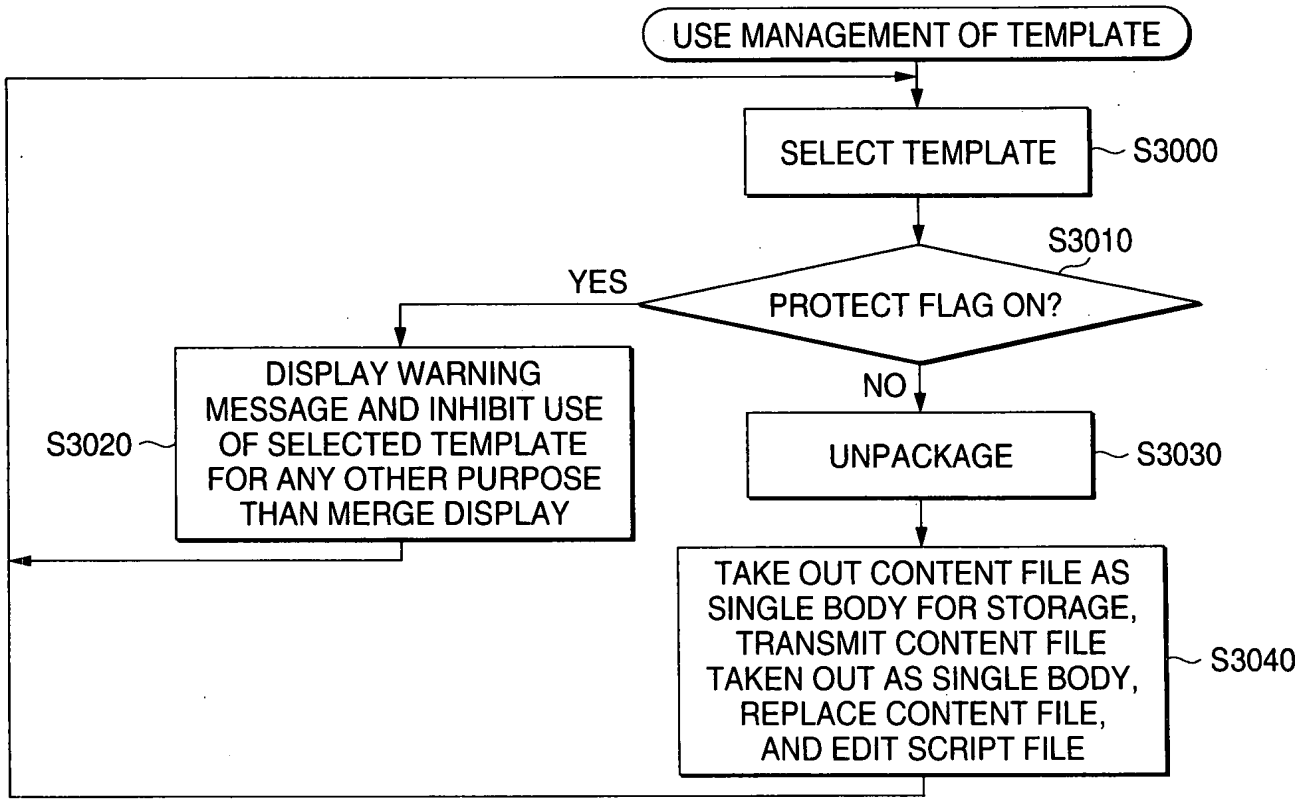

USE MANAGEMENT OF TEMPLATE
SELECT TEMPLATE
S3000
S3010
PROTECT FLAG ON?
YES
NO
DISPLAY WARNING MESSAGE AND INHIBIT USE OF SELECTED TEMPLATE FOR ANY OTHER PURPOSE THAN MERGE DISPLAY
S3020
UNPACKAGE
S3030
TAKE OUT CONTENT FILE AS SINGLE BODY FOR STORAGE, TRANSMIT CONTENT FILE TAKEN OUT AS SINGLE BODY, REPLACE CONTENT FILE, AND EDIT SCRIPT FILE
S3040

FIG. 40

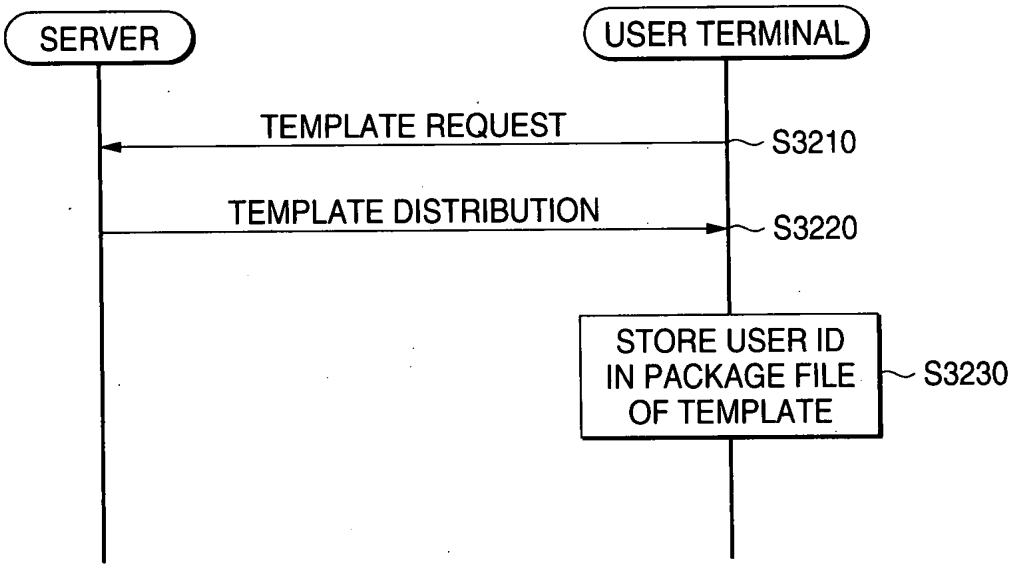
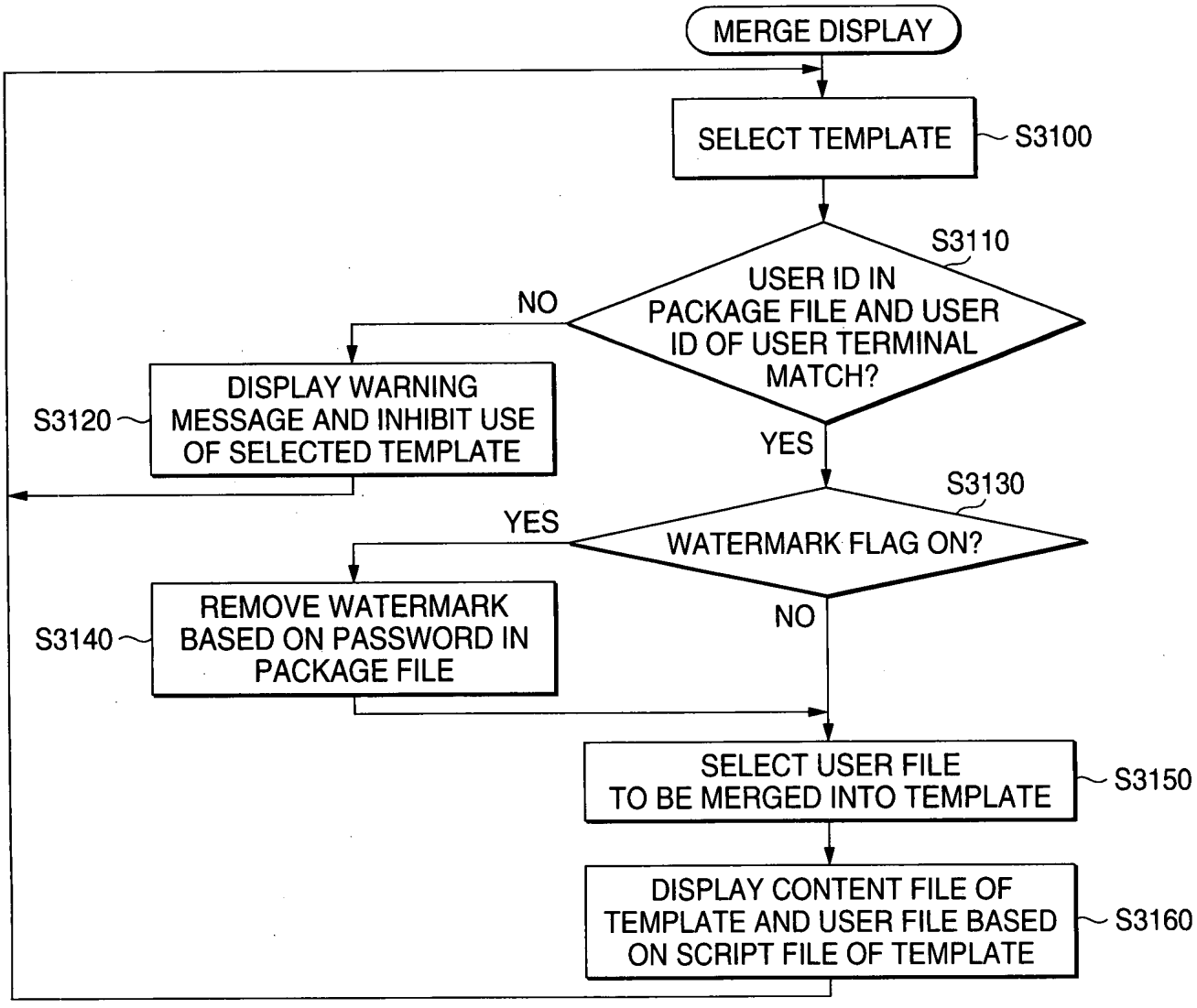

SERVER
USER TERMINAL
TEMPLATE REQUEST
S3210
TEMPLATE DISTRIBUTION
S3220
STORE USER ID IN PACKAGE FILE OF TEMPLATE
S3230

FIG. 41


MERGE DISPLAY
SELECT TEMPLATE
S3100
S3110
USER ID IN PACKAGE FILE AND USER ID OF USER TERMINAL MATCH?
NO
YES
DISPLAY WARNING MESSAGE AND INHIBIT USE OF SELECTED TEMPLATE
S3120
S3130
WATERMARK FLAG ON?
YES
NO
REMOVE WATERMARK BASED ON PASSWORD IN PACKAGE FILE
S3140
SELECT USER FILE TO BE MERGED INTO TEMPLATE
S3150
DISPLAY CONTENT FILE OF TEMPLATE AND USER FILE BASED ON SCRIPT FILE OF TEMPLATE
S3160